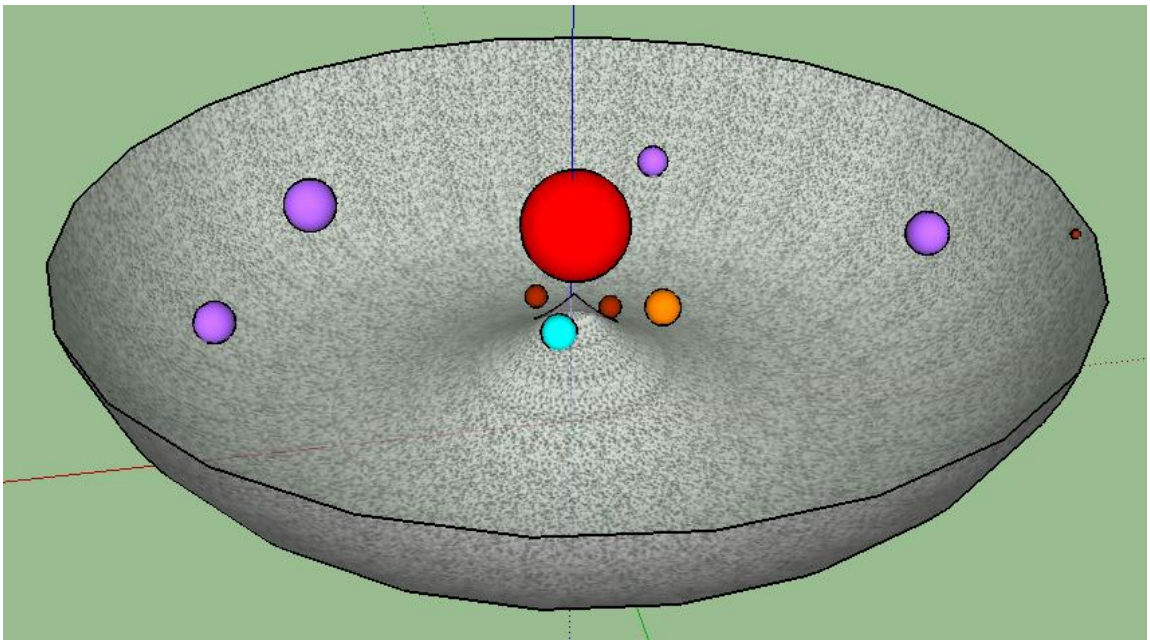
Gravity explained logically, finally.



Louis Joseph Rancourt

Important remark

This book is a summary of years of research. It is not to be sold but given freely to anyone interesting in understanding gravity, light, electricity, magnetism and few other unsolved problems in physics.

My own drawings can be used freely by the public. Figures from Internet used here cannot be used unless permission is received from the authors of these figures.

About the author.

Professor Louis Joseph Rancourt is a retired tenure professor from Université d'Ottawa. He has also been teaching for 52 years from grade 7 to high school, at Cambrian College, and at Collège Boréal. Trying to understand gravity, he made hundreds of experiment and lots of reading about theories. This is a summary of his research, hoping it will help others to better understand our universe.

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Introduction

As a young student at the University of Ottawa, I was reluctant with some explanations in physics. For example, how can we explain that the earth was attracted to the sun? If the sun sends something towards the earth, it should push the earth and not attract it.

When I throw a rock at a beer bottle, the bottle does not come towards me, but it moves away.

If gravity is a gravitational field, what makes that field? Is the space-time curvature theory real or just a mathematical trick?

So I tried to discover the true nature of gravity by doing many experiments and reading about it. Finally, after so many years, I discovered the effect of light on gravity. This fact led me to examine other phenomena and I discovered new facts. This is therefore the journey I have made during these years to understand our universe.

Here are some facts that cannot be explained logically by mainstream physics; they suggest new logical explanations.

1. Light has an effect on gravity.

2. Light turns into matter and matter turns into light.

3. An object loaded with surplus electrons sends something straight across in all directions. This can be blocked easily.

4. In its orbit in June, the earth returns to the sun, even if the conventional gravitational attraction is weaker.

5. Stars in spiral galaxies do not obey gravity formulas.

A new logical explanation allows to understand these facts and moreover to logically explain other known phenomena.

Happy reading!

History of the discovery of gravity.

What is gravity? This question has been asked for many years and many have tried to unravel its secret.

One can read different theories on this subject, but none has ever satisfied me. Even Newton did not seem satisfied when some claimed, for example, that the sun attracted the earth, because he could not explain how one object could act at a distance on another object.

After many experiments on gravity and much reading on this subject, I still did not have a solution. Podkletnov wrote about a spinning wheel that could change weight on an object.

I tried to replicate his experience without success. I thought maybe the atoms in the wheel were going fast enough to change the path of the famous gravitations. Maybe then we could use light to deflect gravitons, because light goes very fast. Using a 3 milliwatt laser that produced a laminar beam passing between two masses, I managed to see a small deviation on a torsion pendulum. The pendulum was simply a wooden rod suspended in the middle by 2 thin wires. A mass wais placed at each end. The pendulum was swinging slowly.

In the drawing we see how the light passes between the two masses. Figure 1. A screen stops the light so that it has no effect on the second mass at the other end.

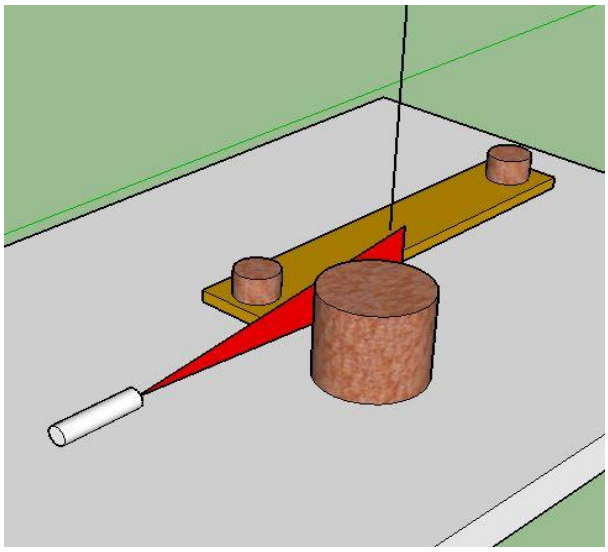

Figure 1. Laminar light beam between masses

What is supposed to happen can be explained like this: if the large mass attracts the small mass, then the light ray will partially block the gravity sent by the large mass. So the small mass should move away from the big mass.

Surprising result: the small mass approaches the large mass as if gravity had increased!

After hundreds hours of testing, I had enough results that show that light can affect gravity between masses. Figure 1.

Conclusion:

The gravitational attraction seems to be greater in the presence of light. This is not foreseen by any current theory.

In March 2010, I stopped experimenting, because the results were always the same. An explanation for the phenomenon had to be found. I didn't know any physical theory that could explain it.

I thought that gravity might not be something sent by one mass towards the other mass, but would be something coming from all directions in space. I search the Internet and realize that others had thought about it, but it was not taught in physics. Fatio and Lesage had mentioned this to Newton, but Newton would not accept this theory.

In summary, their theory says that we are bathed in an atmosphere by small parts that travel very fast; an example would be the air around us even if we don't see it. Air molecules push objects one way or the other. Currently, you are pushed left on one side and right on the other side. Since the two forces are equal, you go neither left nor right. If you could block some force pushing you to the left, then the force from the right side would be stronger and you would be pushed to the left. It happens when there is a lot of wind. The invisible air pushes you more to the opposite side where the wind is coming from. A good example is air pushing the aircraft wing upwards with more force than air pushing the wing down; so the plane is pushed up.

Because the effect discovered was small, it had to be verified with a more powerful laser. I was teaching at Collège Boréal at the time. The Collège Boréal

Research Centre bought a 1.5 watt laser so that I could check if the discovery was real.

The drawing shows the apparatus using this 1.5 watt laser that sends a laminar ray between two masses. (Figure 2) A small laser sends a fine beam on the mirror placed in the middle of the support. The small laser red dot is reflected on a ruler. This allows the pendulum twisting movement to be recorded. A screen stops the red beam so that it acts only on the nearest mass. The torsion pendulum is placed in a box to prevent drafts. The photo shows the two lasers used. Figure 3.

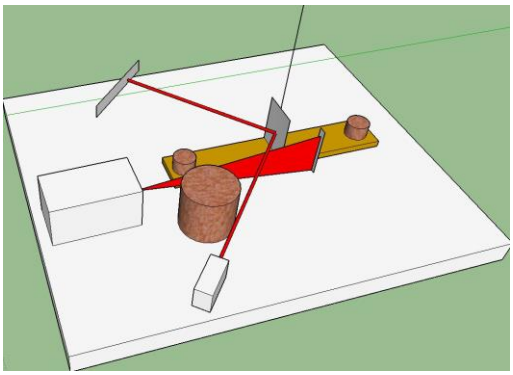

Figure 2. Complete setup.

Figure 3. Apparatus used.

Many trials show that the mobile mass always comes closer to the fixed mass when the laminar laser beam passes in between them, as shown in the next graph. Figure 4.

For about 30 minutes, the mass was moving slowly away from the fixed mass to attain its normal rest position. When the laser light was activated, it moves closer to the fixed mass. This is indicated by the red wavy line. When the light was shut off, the mobile mass returns to its normal rest position, as indicated by the green line.

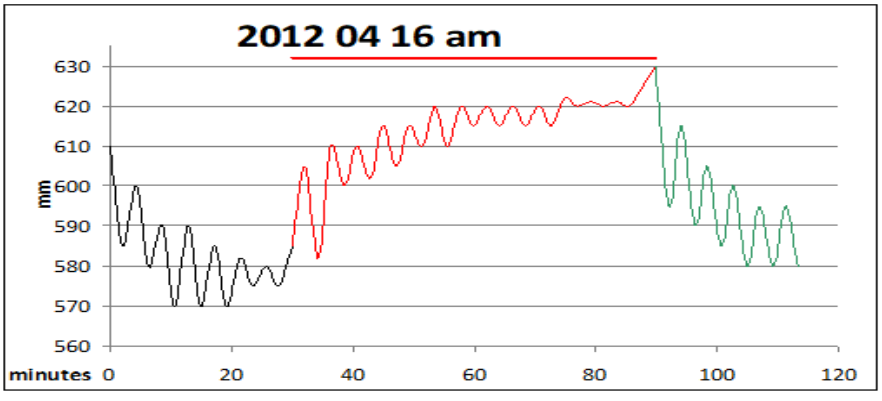

Figure 4. The mass movement when the laser light .

Possible verification:

If something in space goes in all directions and acts on objects, it is possible to verify this by moving the laser beam to one side of the small mass and then to the other side after removing the big mass. Figure 5.

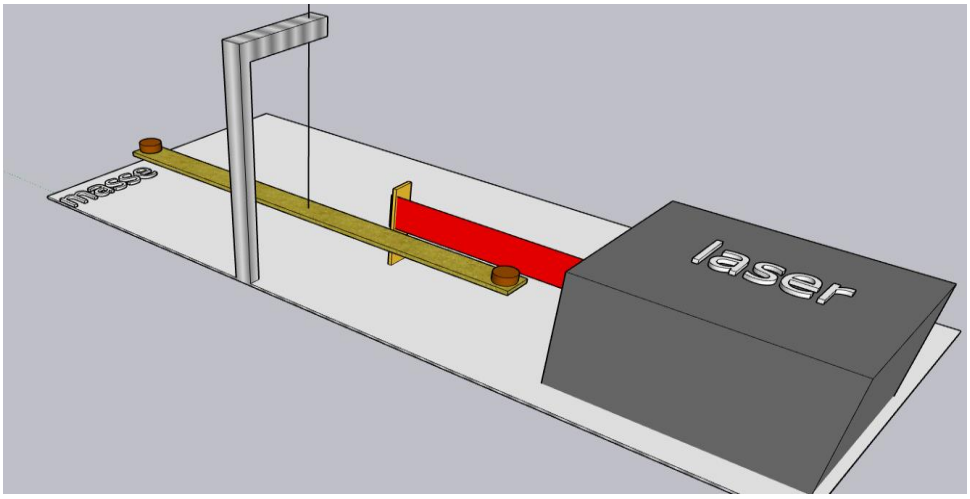

Figure 5. Without the big fixed mass.

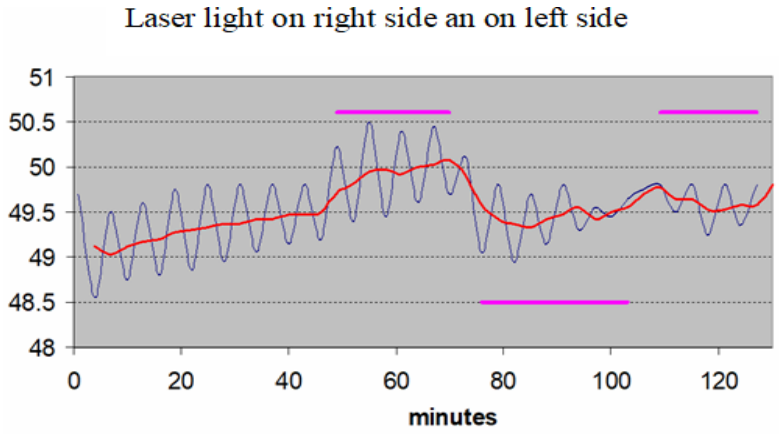

Figure 6. **Results, July 7**

The graph shows results recorded during a session in July. The curved line indicates the pendulum movement to one side and then to the other side. The horizontal magenta line indicates when the laser is active. The red line indicates the average position. Figure 6.

At first, the pendulum oscillates for about 50 minutes and as soon as the light is on one side, the moving mass moves towards the light. As soon as the laser light

is placed on the other side, the mass slowly oscillates towards the direction of the light.

To make sure that it was the presence of light that caused this effect, a hundred-watt bulb was placed in a steel box. (Drawing figure 7 omits the front side). A thick plywood was between the moving mass and the bulb. When the pendulum stabilized, the bulb was activated. The pendulum immediately began to oscillate more and the mass moved closer to where the light was hidden.

So gravity passed through the steel horizontally and light blocked some of that horizontal gravity. Because of this, the gravity coming from the other side was now greater and it pushes the moving mass towards the light.

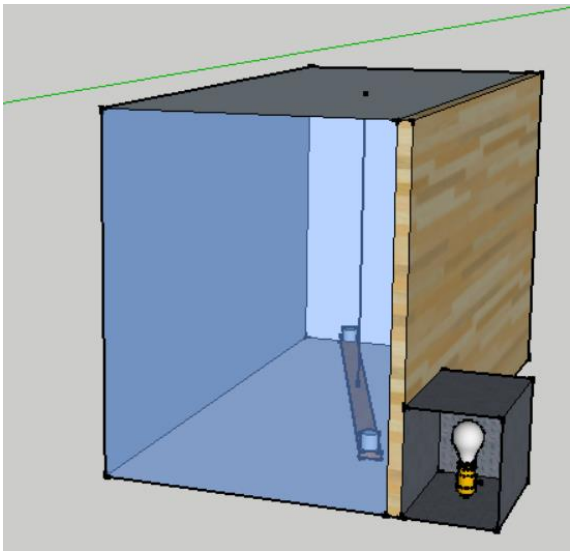

Figure 7. Light in steel box.

This experiment was conducted with variations over months and the results have always been the same.

A light ray between two masses brings the movable mass closer to the fixed mass.

I made observations for more than 1000 hours, sometimes changing the device a little to improve the results. It was also necessary to check all other parameters that could affect the mobile mass movement.

Here is a list of verified parameters:

a) If a mass becomes charged with a few electrons, the static electricity force is so much greater than the gravity force that it could move the mass. Perhaps the laser beam acts on air molecules and makes them charged with static electricity. This was checked, but no charge was detected in the air; articles on the Internet confirm that the red light from the laser does not have enough energy to ionize air molecules.

b) Perhaps the laser beam heats the air and the air movement close to the mass would be enough to move it. To check whether the air is heated, a sensitive detector is placed directly near the mass above the laser beam. The temperature does not change. In addition, the observed effect begins immediately when the light passes between the masses and the effect stops when the light is removed. If there were warm air drafts, it would not be instantaneous.

A second attempt was made to see the drafts: a small device made using many thin silk threads was placed immediately behind the masses. If the air moves, the silk threads will move too. Light silk threads did not move.

The entire device was placed behind a transparent plate in a closed box. If someone walks or moves, the air movement does not spread to the other side where the device is. The 1.5 watt laser used was cooled by a fan. This is why the laser was on one side of the transparent plate and the device on the other side.

Someone suggested placing a screen between the mass and the laser beam, so that the mass could not 'see' the laser light in case the light causes a slight drop in pressure on the mass surface. The experiment was done and the mass still moved when the light beam was sent.

c) The laser used has many electronic parts. Maybe all these parts send an electromagnetic field to the moving ground and that would be enough to move the mass.

To verify this, a thin silver aluminum tape was placed in front of the laser beam in order to deflect the light at 90 degrees. Thus, the laser beam no longer penetrated the box. We started the laser and observed the mass movements. When everything was stable, the reflective tape was removed and the light went

between the masses. The moving mass began to change right away. The effect therefore comes from the laser, not from electromagnetic waves.

Another way to check is to replace metal masses with masses that are not affected by electromagnetic waves. A large apatite rock crystal and a hematite rock were placed on the pendulum. The effect was the same as with bronze masses.

d) The effect of earth movement is called Coriolis Effect. Is earth movement powerful enough to move the mobile mass? To verify this, the pendulum was placed in different directions and places. The pendulum was taken to Collège Boréal in a warehouse, close to a wall leaning against the rock. The same effect was still observed.

I discovered that light can change gravitational attraction. My years of research were rewarded

I told my friends about this discovery and they suggested to publish the discovery. Collège Boréal helped me publish the discovery under the following title:

Effect of light on gravitational attraction

November 2011 Physics Essays 24(4) :557-DOI : 10.4006/1.3653936

Second set of observations with an aluminum box.

It is very difficult to measure the relationship between the amount of gravity blocked by light and the intensity of light using only a torsion pendulum. So I built a device to measure the effect vertically on a 200 g mass. With 63000 lumens from 9 large fluorescent bulbs, the light is reflected by mirrors and passes horizontally into the box measuring approximately 1.2m x 1.2m x 0.1m. Figure 8.

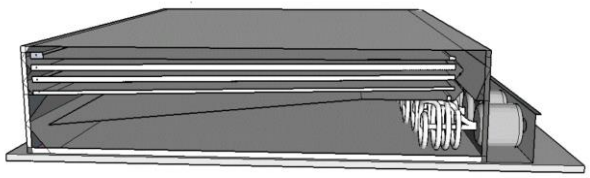
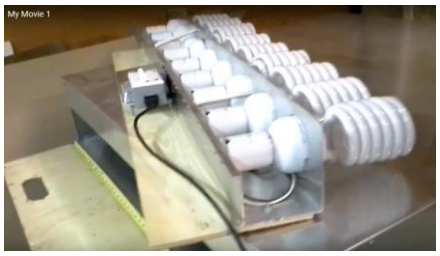

Figure 8. Inside view, and light bulbs before going in the box.

Figure 9 shows how a mass is placed on the support under the box. The support is enclosed in a container to prevent air movement. One end of the support is resting on the balance tray on the right. So half of the weight is on the scale and the other half is on the pivot at the other end of the support. Several insulators between the box and the mass ensure that a change in temperature is not a factor. Switches are used to control the amount of bulbs activated.

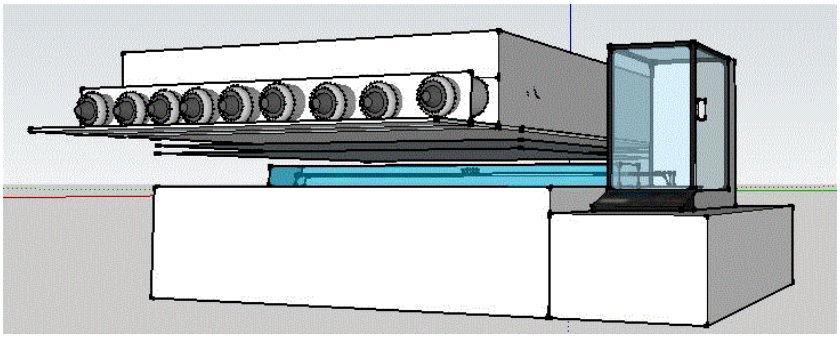

Figure 9. Box with 63000 lumen

Here are the results based on this graph. Figure 10.

At first, weight is stable, as indicated by the horizontal line. When the bulbs are on, weight decreases from 3,099 N to 3,095 N in about 350 minutes as indicated by the red line.

When the bulbs are turned off, weight slowly returns to its normal value, as indicated by the dotted line.

The mass loses weight when it is placed under the beam of light.

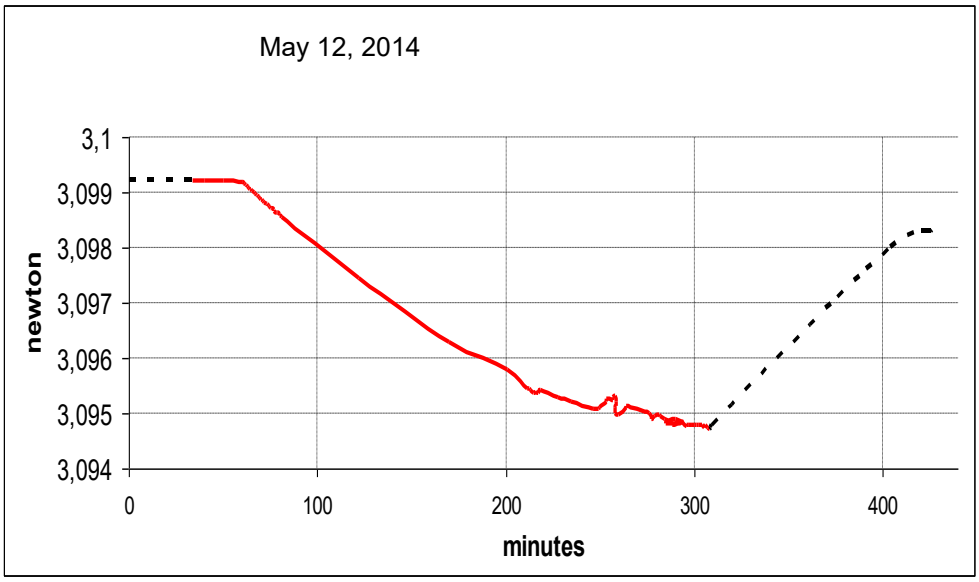

Figure 10. With mass over the 3500 lumen light beam.

We repeat the experiment many times with the mass under the box. Weight decreases each time. Then the mass is placed on top of the box.

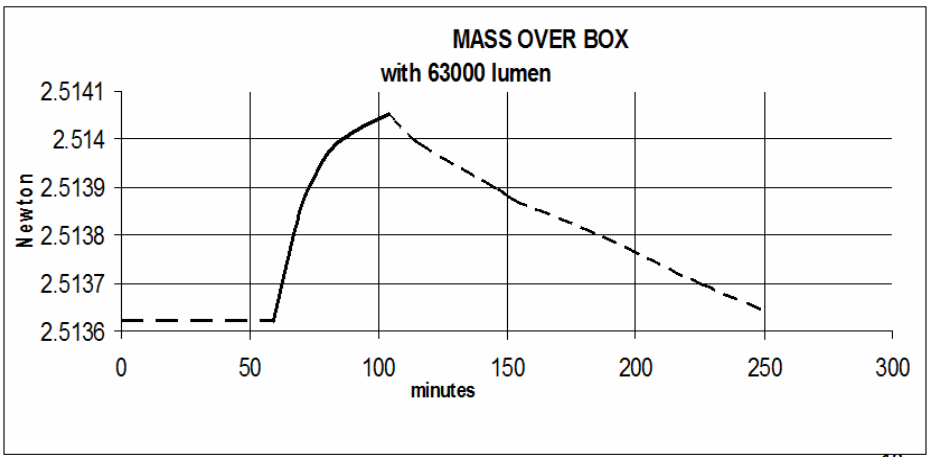

Figure 11. Mass gains weight when placed over light beam.

In the graph, we see that weight was almost constant for 52 minutes before turning the bulbs on. Weight increases when the bulbs giving 63,000 lumens were on. Weight increases rapidly and stabilizes almost around 100 minutes.

When the bulbs are turned off, weight slowly returns to its original value after 250 minutes. (Figure 11).

What conclusions do these observations suggest?

The most surprising thing is that an object placed above the box gains weight even if its mass does not change. Many graphs show that the change in weight increases when the light is more intense. This change therefore depends on the light. The effect of light on gravity varies directly with the power of light.

How does this discovery explain the gravitational effect? This drawing will help to understand. Figure 12.

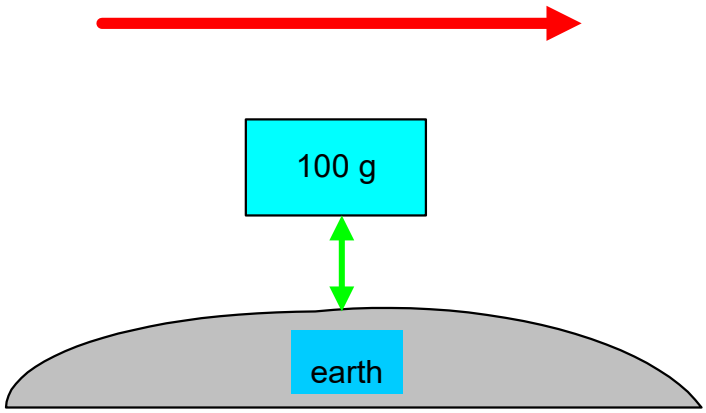

Figure 12. 100 grams mass over earth.

A 100 grams mass on earth has a 1.98 Newton weight.

A powerful laser beam passes over the mass and its weight drops to 1.88 Newton. If the earth mass attracts the of 100g mass, this occurs between the earth and the mass as indicated by the double green arrow.

But light does not pass between the mass and the earth, so light does not change this attraction if it exists.

But there is a change. The light passing over the mass blocked something coming from above.

Gravity is not caused by an attraction between the masses, but it is caused by something coming from above that moves the mass down toward the earth. This 1.98 Newton force can be partially attenuated by light passing between the100 grams mass and what comes from sidereal space.

That proves gravity is not an attraction between the masses.

According to Newton's formula, the force of gravity varies directly with the masses and indirectly with the distance between the masses. The formula is written as follows:

FORCE = (MASS 1 x MASS 2) / (DISTANCE) ^{2}

It is important to note here that Newton is not talking about attraction between the masses, but about a force between them. He even wrote that a remote attraction was unlikely. He refuses to make a hypothesis to explain his discovery.

In our case, the force of gravity changes without change in mass or distance. This goes against Newton's formula. Classical physics is based on this formula for everything related to gravity.

It is therefore necessary to review not the formula, but the traditional explanation. If the force of gravity is not an attraction between the masses, what is it then?

The theory must be able to explain how the presence of horizontal light can sometimes increase weight and sometimes decrease it depending on where the mass is placed. A change in temperature cannot do two opposite actions like that. In addition, the effect is immediate, before any change in temperature.

In short, when a powerful ray of light passes over an object, its gradational weight decreases.

When a powerful ray of light passes under an object, its gradational weight increases.

My second paper explains these findings.

Further Experiments Demonstrating the Effect of Light on Gravitation, Louis Rancourt, Philip J. Tattersall, Applied Physics Research, www.ccsenet.org/apr Vol. 7, No. 4, August 2015 issue.

A discovery can be considered authentic only after other scientists have verified it. After 2011, two other scientists found the same effect with different devices and they published their results.

Light-Enhanced Gravitational Constant G, Hovering Liao, January January, 2014

Libor Neumann, Experimental verification of electromagnetic-gravity effect : Weighing light and heat, Physics Essays, Volume 30, Number 2, June 2017.

The question that remains is this: by what process can light change the gravitational forces on objects. What is the true nature of gravity? The graviton as currently described does not have the properties capable of explaining these effects. We have to look at other results of real experiments to understand it.

Other important observations help to understand gravity.

Light becomes matter and vice versa.

This happens when a high-frequency light called a gamma light ray passes through a thin sheet of heavy metal. Light is transformed into two systems named electron and positron that move away quickly.

When the positron meets an electron, the pair becomes gamma light again. The positron resembles the electron, but does not exist for long, because it quickly turns into light. This phenomenon is used in the hospital in the machine called PET scanner.

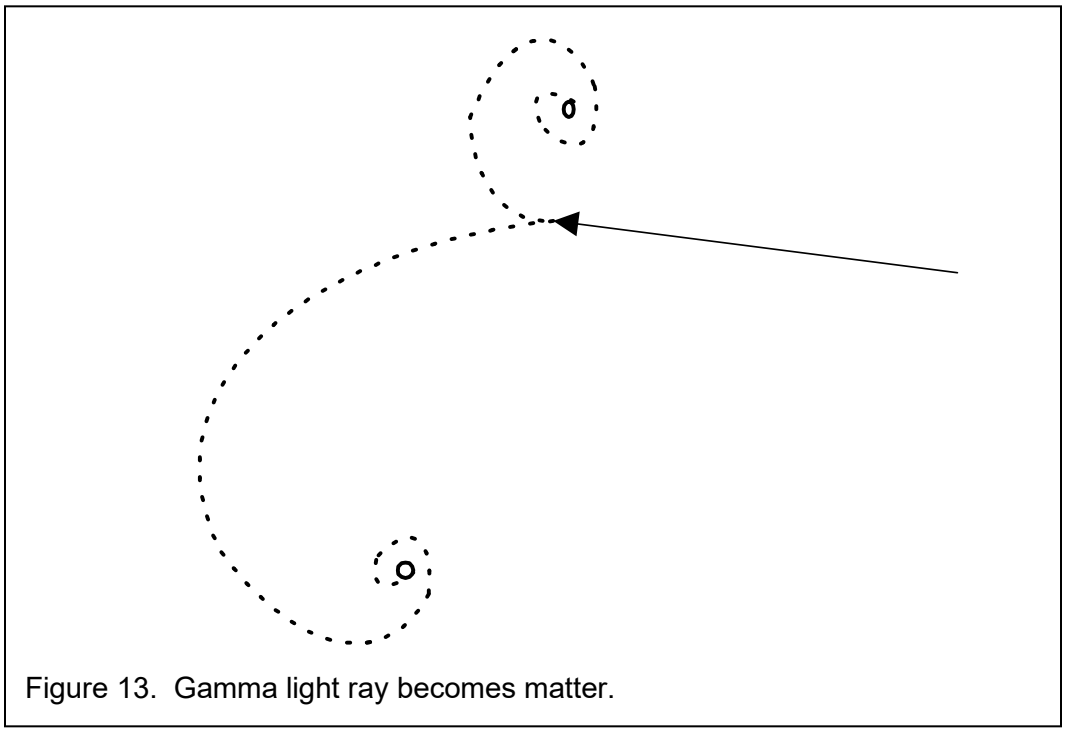

Figure 13. Gamma light ray becomes matter.

The drawing shows bubbles traces in a pressurized liquid device called a bubble chamber. A powerful magnet is placed under the bubble chamber.

A gamma light ray arrives from the right to the top of figure 13.

This gamma ray interacts with an atom and becomes matter systems in two parts forming spirals going in opposite directions. The spirals are caused by an electron and a positron changing direction because of the magnet placed underneath. You can see more detailed explanations on the internet.

The important thing here is to see that gamma light has become matter, just as matter becomes light in a PET scanner. Only a few grams of uranium became light in the atomic bomb over Japan.

Is it possible that what makes up electrons, positrons, atoms is the same as what makes up light? What entities would be able to exist as light and also as complex systems like atoms?

Let's see more real results.

*N.B. The word **entities** will be used for these strange something causing gravity, light, etc. It will be defined more clearly latter in the next pages.*

Static electricity.

A few very simple experiments seem to confirm the existence of these entities.
A probe made of a CMOS NAND electronic chip is very sensitive to the presence of surplus electrons on an object. A 3 cm copper wire is placed as a receiving antenna on the probe.
A 4 cm copper wire is placed as the transmitting antenna on an acrylic ruler. The acrylic ruler is rubbed on fur. Electrons jump from the fur to the ruler. If the air is dry, these electrons remain on the ruler long enough.
When the probe is approached by the electron-charged ruler, the probe can detect these electrons. Figure 14.

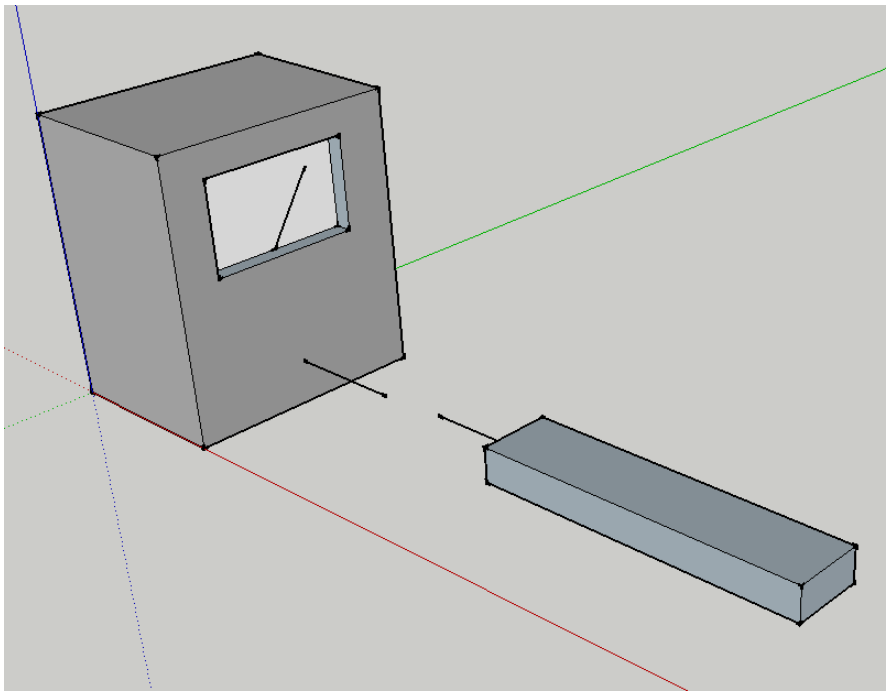

Figure 14. Probe and electrons charged plastic ruler.

Michael Faraday studied a similar effect and coined the term 'field' to describe the places in space where a probe can detect the presence of an electrons surplus. He could not explain how the probe can detect remotely without contact with the charged object. This field is a mathematical model, not a physical reality. This field is supposed to be everywhere in the universe as soon as an object has an electrons surplus. We know that nothing can be everywhere in the universe, because it requires infinite speed.

If this field really existed, the presence of a small object between the source and the probe should not change the field strength everywhere in the universe. A simple experiment shows that this is not the case.

The ruler with an electrons surplus is placed in front of the probe. The needle moves and indicates the result in millivolts. Figure 15.

We move the ruler to one side and then to the other, then up and down to find the region in space where the effect is the same in millivolts.

This equipotential zone is drawn in yellow and has a spherical shape. The meter indicates the presence of surplus electrons in the ruler when the needle moves.

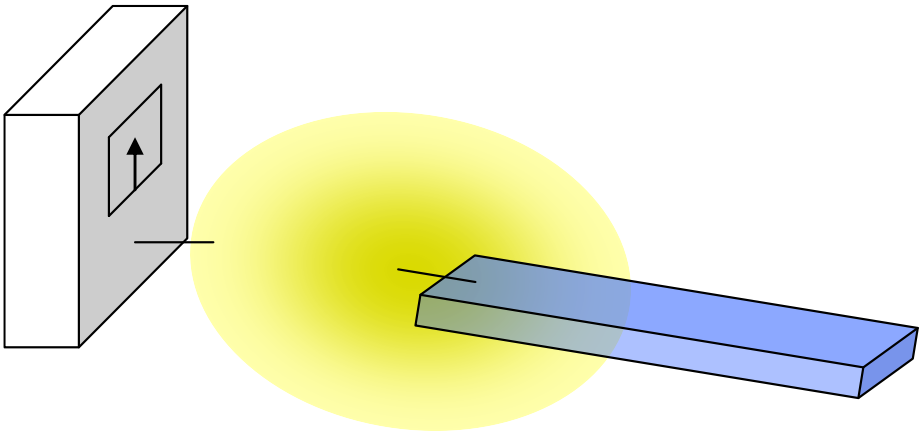

Figure 15. Equipotential region at the end of charged rod.

A neutral plastic rod 3 mm by 1 mm and 10 cm long is used. This neutral rod is placed between the probe and the source so that the surface is large. The probe's needle indicates no more electron surplus in the ruler. Figure 16.

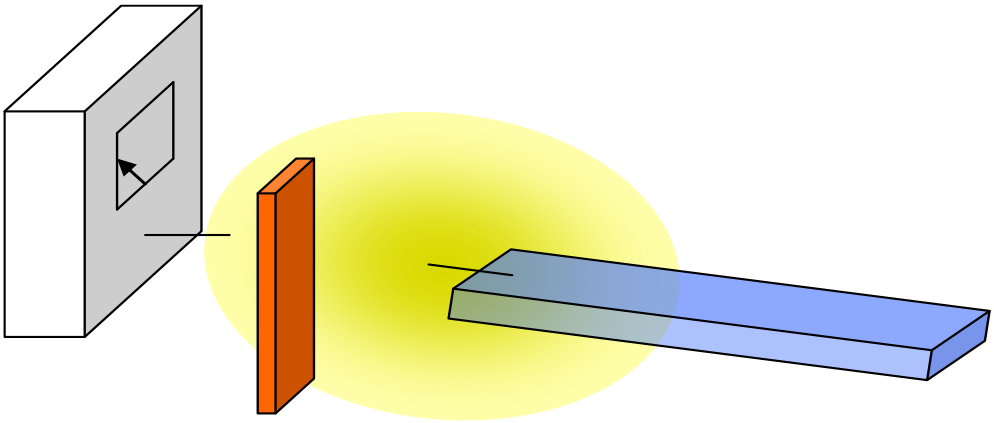

Figure 16. Neutral rod between sensor and ruler

If the plastic rod rotates 90 degrees in the same location so that the surface area is small, the probe indicates normal amount of surplus electrons as if the rot wasn't there. Figure 17.

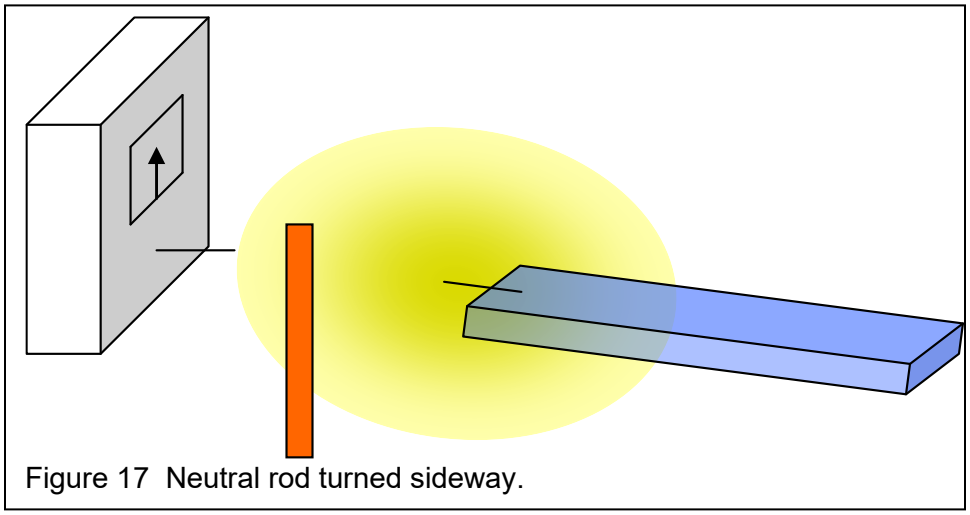

Figure 17 Neutral rod turned sideway.

It is observed that the neutral plastic rod can change the intensity of what is perceived by the probe depending on the size of the surface between the probe and the source.

Since the number of atoms in the rod does not change when it is rotated 90 degrees and the position remains the same, there should be no change in the strength of the 'field' detected by the probe. The 'field' theory cannot explain this effect.

It seems that there is something real that starts from the electron charged ruler and goes in all directions. Something real causes a change in intensity. This goes in a straight line.

This seems to confirm that the surplus electrons on the ruler send entities in a straight line in all directions.

Another observation provides a better understanding of light itself.

We still use the probe and the ruler having a surplus of electrons. The voltage in millivolts is observed on the probe. We move the ruler by approaching it and moving it away quickly. The probe needle probe indicates a change at the same frequency as the ruler movement. The intensity of what goes from the ruler to the probe varies at the same frequency.

If we could see these entity issues, we would probably have a result like this. The intensity decreases with the square of the distance. This is indicated in the drawing by a decreasing intensity. The arrows indicate that the electron emissions are radial, starting from a point in the center. Figure 18

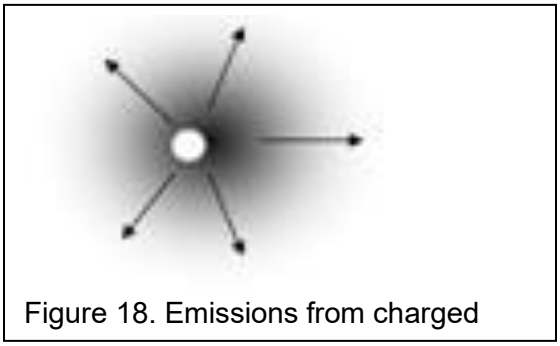

Figure 18. Emissions from charged

When the ruler charged with electrons moves, the emissions vary at the same frequency. This creates layers in space where the density changes periodically. Figure 19

Radio waves are exactly like that. Visible light would be the same at a frequency close to 10^{14} cycles per second.

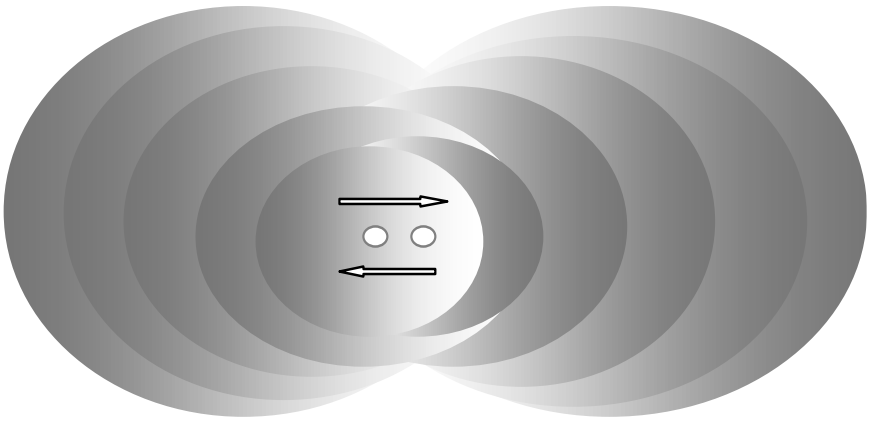

Figure 19 Vibrating charged object emitting radially.

This seems to confirm that light is actually a change in the intensity of emissions from matter organized in systems.

Faraday and Maxwell saw light as a change in electrical and magnetic intensity. Yet light has no electric or magnetic charge.

Earth's orbit.

Every year, when the earth is far from the sun, the supposed attraction force would be 43% less strong because of the greater distance.

The table gives the measures on this effect. Figure 20.

Figure 20 Force = G x mass1 x mass2 / (distance)^2		
Value of constant G	6,6741 E-11	
Sun mass	1,99 E+30	kg
Earth mass	5,97 E+24	kg
January distance Sun-Earth	9,61 E+06	
June distance Sun-Earth	1,46 E+07	
Force in January	8,58 E+30	Newtons
Force in June	3,71E+30	Newtons
% difference of forces	43,27%	

Earth is less attracted in June. It should continue in a straight line away from the sun. But no, it comes back as if an external force were bringing it back to the sun. The attractive gravity theory cannot explain this. This effect also occurs for other planets, for comets and for anything that orbits a star. Where does this strength come from then? The following drawing helps to understand why the earth returns to the sun in June. Figure 21.

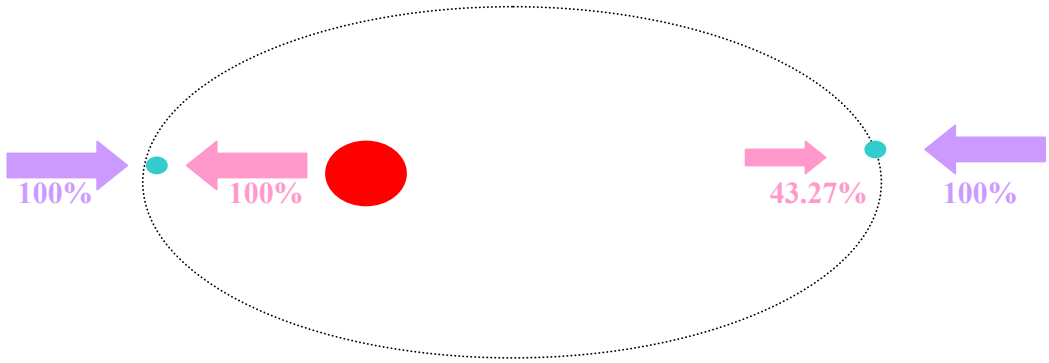

Figure 21. Entities from space and from the Sun arriving on Earth

The dotted line represents the orbit if the earth simply followed Newton's formula, without any effect from space. The big puple arrow represent entities from space arriving on Earth and the pink arrows represent entities emitted by the sun toward Earth. The intensity goes down with the distance squared.

Problems with stars in spiral galaxies.

The speed of stars in the galaxies arms does not follow Newton's formula on gravity. Stars more than 25,000 light-years away have almost a constant velocity above 200 km/s

These stars do not follow the standard formula because they should go slower and slower.

Conclusion: we have several observed facts that suggest a new approach.

1. Light has an effect on gravity.
2. Light becomes matter and matter becomes light.
3. An object charged with electrons sends something in a straight line in all directions. This can be blocked easily.
4. The earth returns to the sun even if the classical gravitational pull is weaker.
5. Problems with stars in spiral galaxies.

New approach in physics

Do we really need a new approach to explaining observations in the field of physics?

The scientific literature mentions almost every day that we need to review current theories when a new discovery is made. Jean de Climont publishes a list of 9000 scientists who are not satisfied with the theories of relativity or quantum mechanics.

It seems that the biggest problem with current theories in physics is simply the fact that you cannot unify the force of gravity with the other forces. Yet, by observing the three facts mentioned before, we can understand how entities are at the origin of all forces.

In addition, quantum theories are controversial, because there are simple and logical explanations of observed facts that do not appeal to the strange and almost magical theories of superposition, entanglement, particle-wave duality to mention a few.

In this short paper, we see how traditional physics explains certain facts and how they can also be explained more logically using the concepts of entity interactions mentioned here.

Scientists who advocate wave-particle duality rely on the facts observed in the double slit experiment. We will see that it is logically possible to explain these results without resorting to wave-particle theory.

From previous observations, we propose a new approach to explain some strange facts in physics.

New possibilities:

It seems what makes up the electron as well as the neutron and proton is the same thing that makes up light and gravity.

Much like ice, liquid water and water vapor have very different properties depending on how the atoms are organized together.

Similarly, solid, liquid and gaseous matter would be made of something very small organized in different ways.

Since light can become matter and matter emits light, it seems that what is emitted by matter comes from matter itself.
Atoms would emit something very small in all directions and receive as much space from these small entities as they emit.
These entities coming from space would be emitted by the atoms of the universe.
It seems that these entities together in large numbers would form systems called electrons, protons, neutrons and form atoms.
Space would therefore be filled with entities traveling in all directions at the speed of light. These entities would pass through matter continuously.

Four very simple properties of these entities:

1. It seems to be the last small existing entities, not made of anything smaller, therefore they are dimensionless.

2. They must have an interaction area in order to interact with each other.

3. As they are not made of anything smaller, each one must be maintained in existence at each instant.

4. They would be recreated in space right next to the previous position so that these entities always seem to go at the speed of light

These properties then assume that the properties of mass, energy, charge, spin, etc. are properties of complex systems made of these entities, not properties of these entities themselves.

We could call these entities the ultimate sub quanta or the last sub quanta or the light quanta or gravity quanta. This is not the graviton though. There is currently no consensus on the names of these entities. Every scientist invents a name. Here we simply name them entities, because they have the property of simply existing and interacting.

By taking into account the shadow effect when atoms interfere with these entities that advance in all directions of space, it is possible to logically explain all the properties of matter.

Since these entities also form matter in addition to traveling all over space, they continuously interact with atoms. They do not exert a real push on the systems, but interact by becoming an integral part of the system. If there are more entities interacting on one side, the system reorganizes further. The atomic system therefore emits on average as much as it receives, billions every second. To an outside observer, it appears that the system was given some force to exert a push. It is really only a continuous reorganization of the systems that gives this impression.

It is necessary to emphasize the most important fact about the interactions between these entities and the systems called atoms. These entities become a

part of these atoms. The number of entities that form these atoms remains constant on average, as atoms emit entities continuously.

If the light entities are really the same as the entities emitted by electrons and by atoms nucleus, then light should be able to interact with all these entities.

To check if the entities mentioned are real, I did several other experiments. Each of them supports the possibility of the existence of entities that would be at the base of matter.

The effect of light on an object with a surplus of electrons.

This possibility was verified by using a powerful light-emitting diode projector that is activated at a certain frequency. The projector sends about 90,000 Lumen.

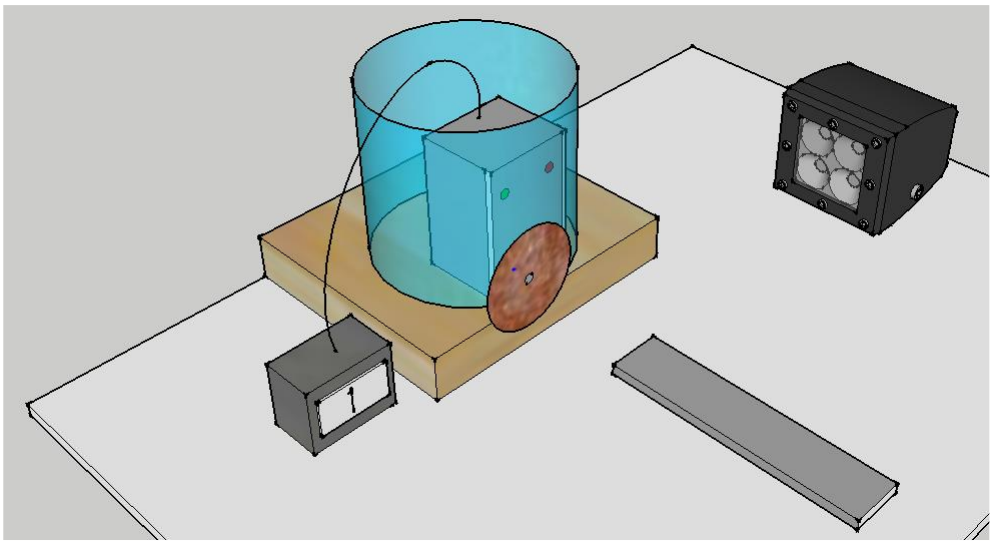

Figure 22 Apparatus to measure effect of light using charged object.

Here is a diagram of the device. Figure 22.

A probe sensitive to excess electrons in an object is placed in an iron container. In this drawing, the container is transparent to show the probe position. This container acts like a Faraday cage by blocking any electric field. It is grounded. A circular copper plate is connected to the probe and placed outside the Faraday cage, to act as an antenna. This probe is connected to a galvanometer. The projector is on the right of the drawing and the rod with excess electrons in front of the probe.

Procedure:

1. An ebonite rod is charged with electrons by friction. It is brought close to the probe and the galvanometer needle indicates the presence of an electrical voltage. The ebonite rod discharges slowly due to the surrounding air humidity. The needle moves slowly and returns to zero.

2. The powerful projector is placed so that the light passes 90 degrees relative to an imaginary line connecting the probe and the charged rod.

3. The rod is charged again and the projector is on at a low frequency. Light passes between the probe and the charged rod. Figure 23.

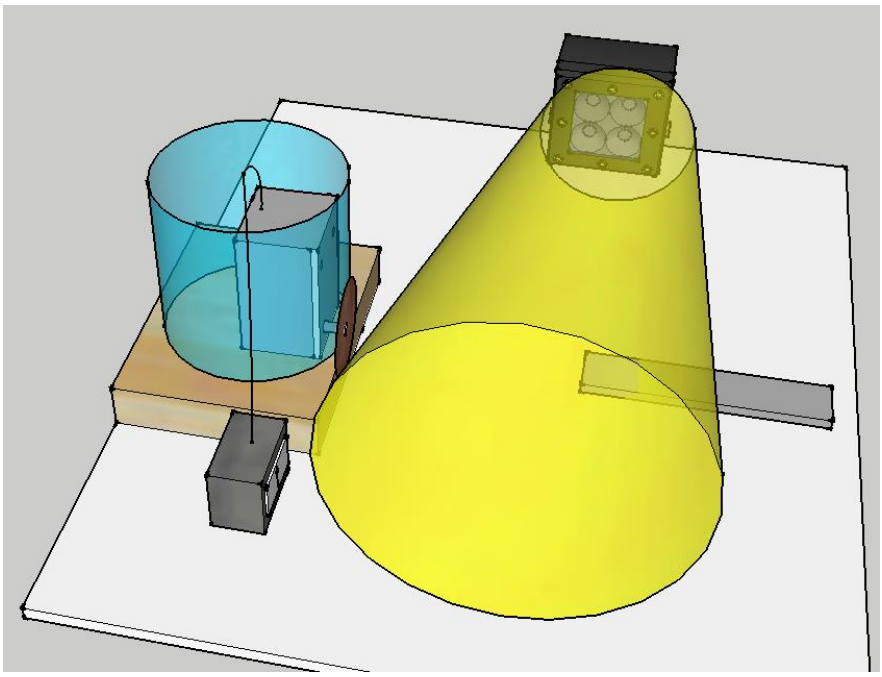

Figure 23. Light beam between probe and rod.

Observation:

The galvanometer needle indicates the presence of an electrons surplus. When the light is activated, the galvanometer needle moves at the frequency of the projector.

Explanation:

When light passes between the probe and the charged rod, it interacts with what is emitted by the charged rod. The intensity sensed by the probe decreases as indicated by the galvanometer. These changes in intensity are at the same frequency as the frequency of the projector.

This confirms that light entities interact not only with gravity entities, but also with entities emitted by an object with a surplus of electrons.

Effect of light on magnets :

Electrons emit entities in all directions. If these entities are the same as gravity, then intense light should be able to interfere with entities emitted by an electric coil. The area that includes the emitted entities is called the magnetic field. This experiment is much more sensitive to make. This is how we proceeded by replacing the electric coil with strong magnets placed on a torsion pendulum. Figure 24.

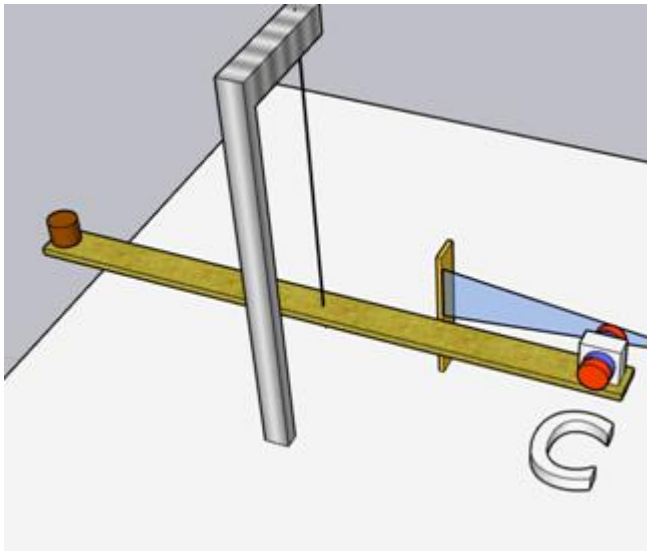

Figure 24. Apparatus with two opposite magnets.

Two powerful back-to-back magnets are placed on one end of the torsion pendulum. On the drawing the red tip indicates a North Pole. Placed in this way, there are N poles on each side separated by a plastic disk.

The counterweight is placed at the other end of the pendulum.

The pendulum is placed in a north-south direction.

When everything stabilizes, the laser beam passes very close to the magnets on the pendulum at C.

The pendulum angle of deflection is noted.

The pendulum movement is not caused by a magnetic effect, but by the light that interacts with horizontal gravity acting on the magnets mass.

Two more magnets are added as shown in Figure 25.

Since the N poles are opposite, the magnets at C on the pendulum are caught between the magnets A and B.
In this position, the end of the pendulum with the magnets at C is held in the middle of these two new magnets, A and B.
The laminar laser beam passed on one side of the magnets placed on the end of the pendulum. The pendulum deflection is noted.

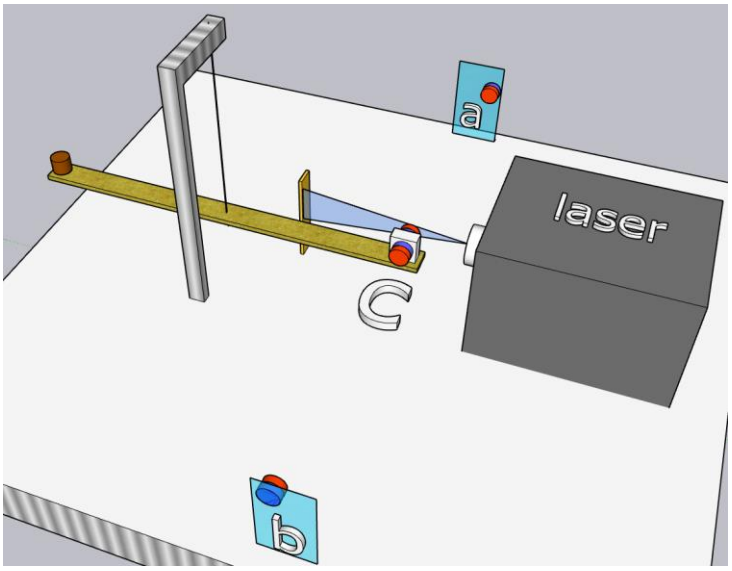

Figure 25 . Apparatus witn 6 magnets.

Observation: Figure 26.
The blue line of the graph indicates the resting position for about 20 minutes. The red line indicates when laser light passes near the magnets placed on the pendulum. The y-axis indicates the deviation in degrees and the x-axis indicates the minutes. The black straight line indicates the average position.
As the laminar radius passes between the magnets, the slope becomes much smaller, as indicated by the slope of the red broken line. This indicates that the light interacted by partially deflecting what the magnets were sending into space. We could replace magnets with electromagnets and we would have a similar result. This indicates that electrons passing through a coil also emit entities in all directions. The magnetic field is the effect of these entities with entities traveling close by in space. This effect is 90 degrees relative to an imaginary line connecting the coil and probe.

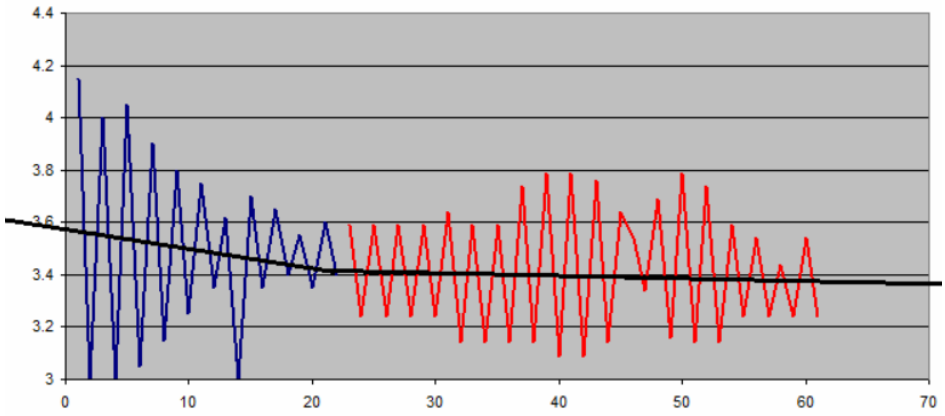

Figure 26. With the laser beam in between magnets.

Effect of an ectric current.

We explained that electrons in an object charged with static electricity send entities in all directions radially.

Do moving electrons in a wire also send entities?

The experimental results seem to indicate that electrons in a coil send entities in the direction of their motion. Figure 27.

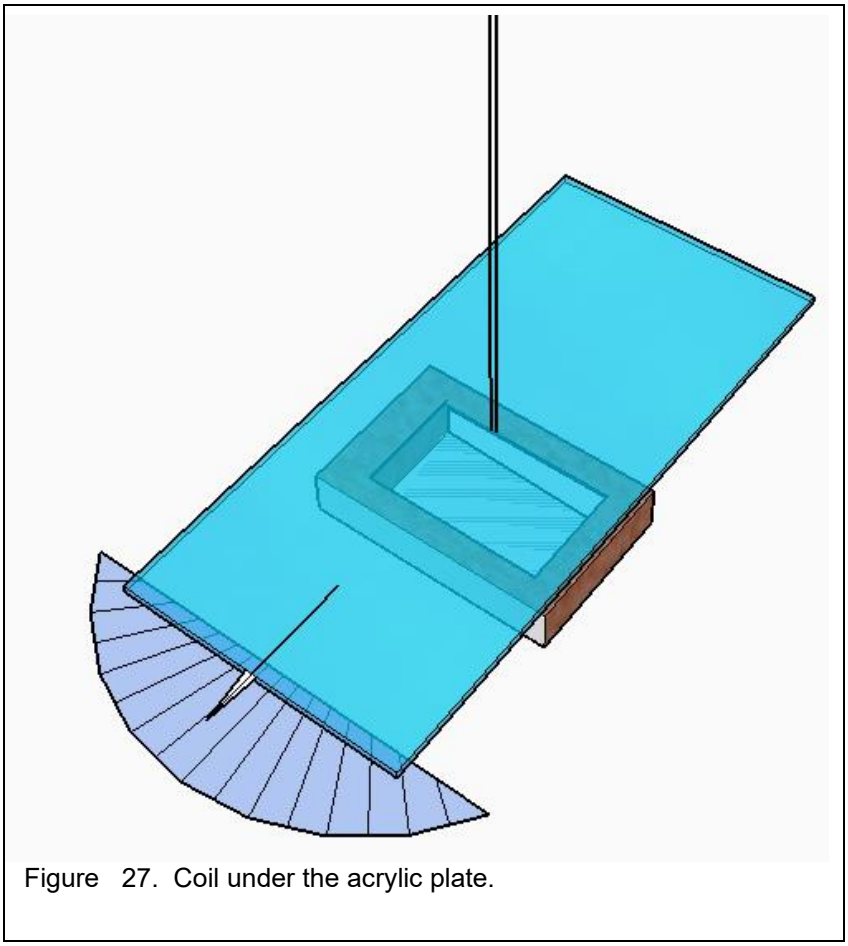

Figure 27. Coil under the acrylic plate.

An acrylic plate about 30 cm by 12 cm is placed above a coil of copper wire. Two thin wires support the plate in the middle. This makes a very sensitive rotational pendulum.

A needle placed on the plate reads the deviation in degrees when the plate rotates on itself.

The graph allows visualizing the plat movements. Figure 28.

Without current in the coil, the plate oscillates at about 54.5 degrees.
The red horizontal lines indicate the average position.
A 0.34 amps direct current is sent into the coil after 4.5 minutes. This makes an N pole above the coil.
The acrylic plate oscillates and takes an average position around 56 degrees.
After 10 minutes, the direction of the electrons is reversed and an S pole is now above the coil.
The acrylic plate oscillates and takes an average position around 54.2 degrees.

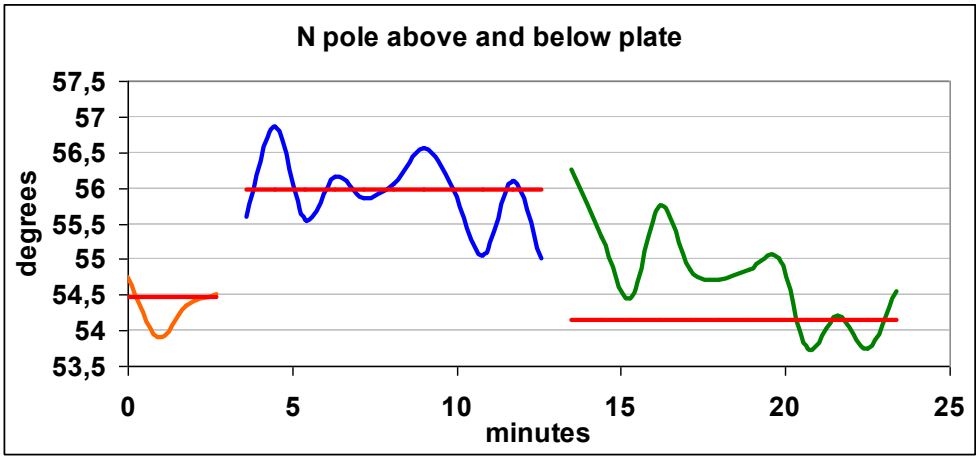

Figure 28. Emisions from moving electrons.

Observation:

The electrons advancing in the coil rotate the acrylic plate in the direction of their movement in the wire. When the direction of the electrons changes, the plate also changes and follows the direction of the electrons.
It should be noted that the acrylic plate is not conductive of electricity.
The only factor that rotates the plate is invisible, but its effect is visible. So it seems that the electrons moving in the wire send entities forward in the same direction. These entities interact with the atoms in the plate. These atoms move through space reorganizing themselves as if they had been pushed.
Interestingly, the effect is greater when the pole of the coil is the same as the pole of the planet. So it seems that electrons in the planet's core also send entities and their cumulative effects cause greater plate rotation.

Gravitational pulses vs gravitationnel waves

Before giving the results of measurements of gravitational pulses, we must see the difference between gravitational pulses and gravitational waves. The word wave in physics has a precise meaning, sometimes different from the word used by scientific popularisers. Sound is a wave that travels through a medium. This medium can be water, air or solid.

When the sound goes from the source to the ear, the air does not travel from the source to the ear. What travels is the change in density of air molecules. When a motorcycle makes a backfire, sound travels in the air and in addition to the exhaust pipe outlet, there is really a gas coming out of the piston frequency of the engine. If you place your hand behind the pipe, you feel gas pulses at the same frequency. These pulses are not waves because the medium (gas) travels. You can have a frequency without having a wave.

The LIGO observatory did not detect gravitational waves, but gravitational pulses. If the observatory could detect a series of pulses with a fixed frequency, it would not be gravitational waves either, as from which would be detected would have really traveled from a place in space to the probe. There is no medium in the space void to transmit a medium disturbance.

The light that goes from one point to another is not a wave like a disturbance in a medium, because light travels in a vacuum, without a medium. The light of any frequency is a series of pulses of real entities advancing at the speed called c in physics. That is 3×10^8 m/s.

When we say that light is an electro-magnetic wave, it is a mathematical description to help with the calculations. Light entities have no electric or magnetic charge, no matter what people say who do not understand the true nature of light with new discoveries. Maxwell didn’t know what we know now when he wrote his findings.

Recent discoveries of natural gravitational pulses.

A sensitive dynamometer makes it possible to note the continuous changes of gravity on earth. Gravitational pulses that last a few seconds to several hours were noticed. These impulses probably stem from stellar cataclysms dating back thousands of years. Entity emissions go at the speed of light and sometimes reach our planet earth.

Some writers call these gravity pulses as being gravitational waves.

The word wave is confusing because a wave needs a medium to travel. In addition, the medium does not travel from one end to the other, but vibrates on the spot. Entities travel in a straight line if they do not interact with other entities. The term gravitational pulse is more apt to describe what we perceive. Gravity is never stable because the entities density arriving on the ground is constantly changing.

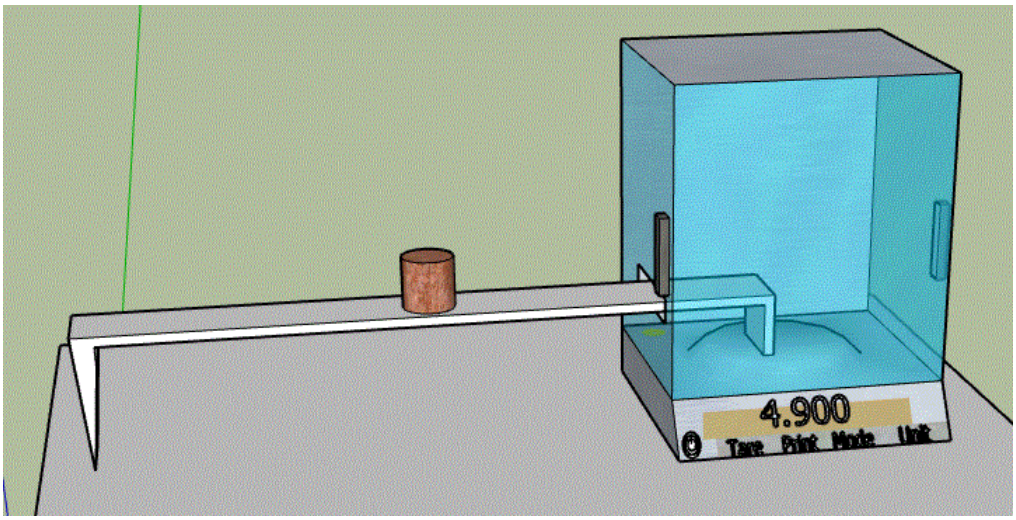

Figure 29. Cantilever scale.

The cantilever scale is based on the lever principle. As the mass is placed in the middle of the lever, half of the weight is on the left pivot and the other half of the scale. When a gravitational impulse from space arrives on Earth, the balance without cantilever does not indicate it, because it compares an unknown mass with a known internal mass. As the two masses vary together, the difference in weight is not perceived. Figure 29.

This difference is perceived with the cantilever scale, because weight of the mass changes, and the scale measures half of this change. We can therefore detect any change in weight due to gravitational impulses.

On November 16, 2022, A gravity pulse was detected, as shown in the next graph. The horizontal axis is the time and the vertical axis is the mass. To get weight changes, multiply by 9.8. Figure 30.

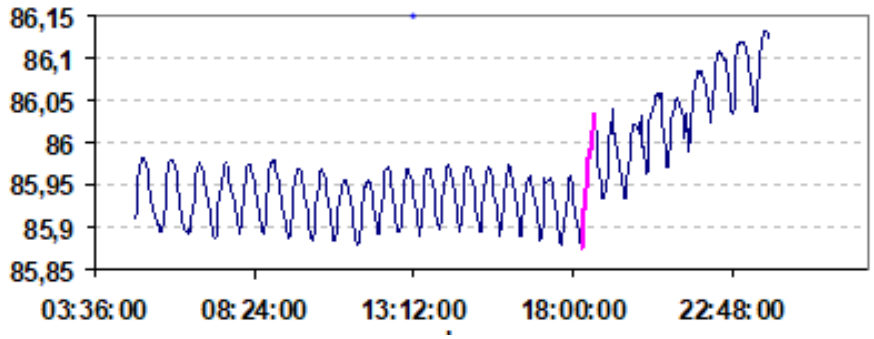

Figure 30. Gravity pulse at 18 :15.

The wavy line indicates that the weight was stable until about 18:14. A sudden burst increased the weight for 24 minutes.

In November 2022, five big pulses and 3 minor pulses were detected. The big pulses are indicated by the red line and the minor one is shown by the blue line on the graph. Figure 31.

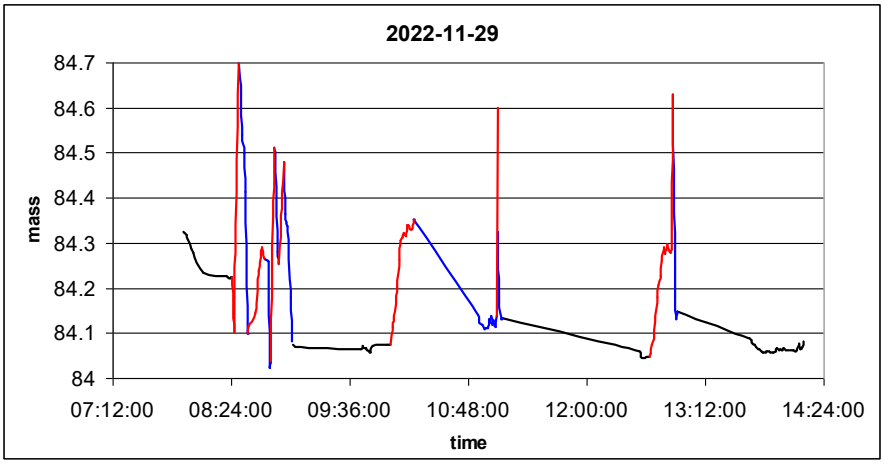

Figure 31. Gravity pulses in November 2022.

The next recording was also made with the sensitive cantilever scale. Figure 32. The natural frequency of the cantilever scale lever is about 20 minutes. It makes the undulations in the graph line.

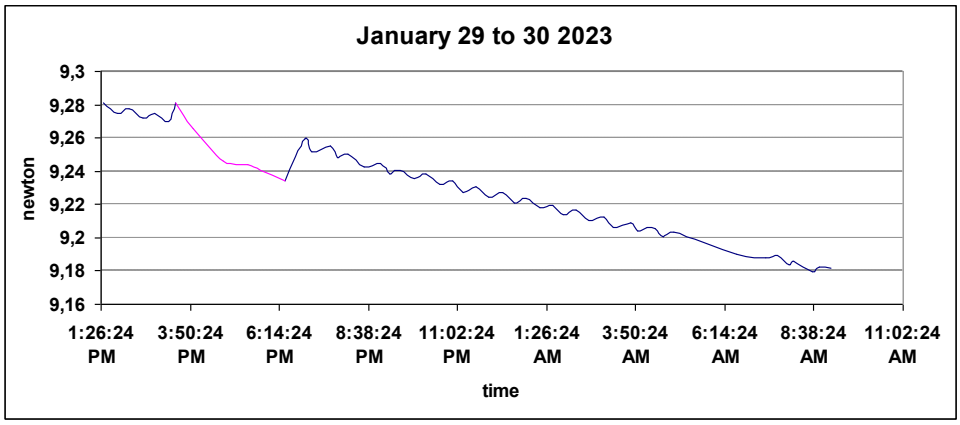

Figure 32. Gravity pulse recorded.

After 1 pm, the weight was stable at about 9.2 Newtons. At 3:37, the weight started to decrease rapidly down to 9.23 Newtons. The weight went back up to 9.26 Newtons and continued to decrease to 9.1 Newton at 9:05 pm.
Another good recording was done for January 2023. The weigh was almost stable until January 11th. It increased in percentage weight until the 25th of January. After that, it returned to its original value. Figure 33.

Figure 33. Percentage weight changes, January 2023

Explanations:

Since the weight is caused by entities coming from above being more intense compared to entities coming from below, a weight loss is caused by a smaller difference between all the entities. Maybe there was a burst of entities coming from below caused by a star exploding in the past. When an increase of entities arrives on our planet, they caused the atoms to move downward and the scale registered a weight gain. When entities decreases and that arrives on our planet, they caused the atoms to move upward and the scale registered a weight loss. Our planet is closer to the sun in January and it slowly moves farther until June. The sudden decrease in weight might be caused by a change of entities intensity arriving on Earth. It was observed at that time that the Earth's core was also moving differently. Maybe that movement caused interactions with entities arriving on our planet.

Gravitational pulses made in the lab.

I built a device to give more than 100,000 lumens using 15 very powerful light emitting diodes. Each is fed individually. They are placed in an aluminum container. The container is full of ice water to cool them. Figure 34.
Here is a picture of a tunnel made with four mirrors is placed in front of the light emitting diodes to direct the light. It all looks like this drawing. Figure 35.

A mass is placed above the mirror tunnel. The light intensity is varied periodically. The weight changes were recorded when the light intensity varied. These weight changes were caused by gravity pulses when tj light entities going horizontally interact with gravity entities going vertically.

It might be possible using powerful light beam to send digital signal through matter using these gravity pulses. Miners rescue might be possible because gravity passes freely through rock.

Figure 34. 15 power diodes.

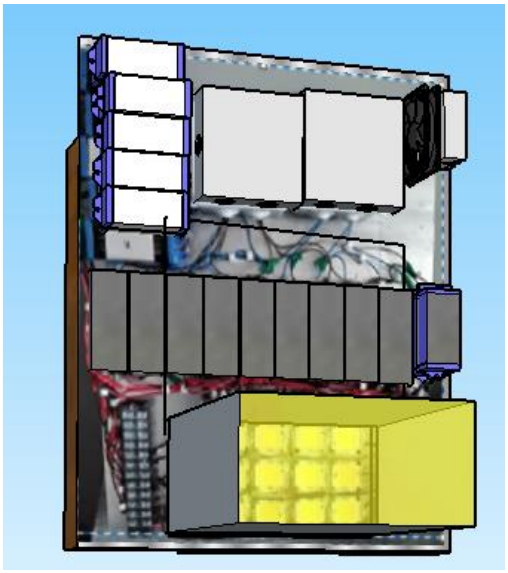

Figure 35. Apparatus with mirror tunnel.

Gravitational pulses can produce electricity.

A copper wire coil is placed above the light beam. One end of the coil is connected to the ground and the other end is connected to the entrance of a NAND CMOS logic gate. The output of the logical gate goes to a galvanometer. When the light beam varies from minimum to maximum, the current goes from zero to 4 milliamps. Figure 36.

A variation in the intensity of gravity entities produces a motion of electrons in a coil in the same way as a variation in the intensity of the entities emitted by an object with an electron surplus. This strongly suggests that entities responsible for gravity are of the same nature as entities emitted by electrons and entities of light.

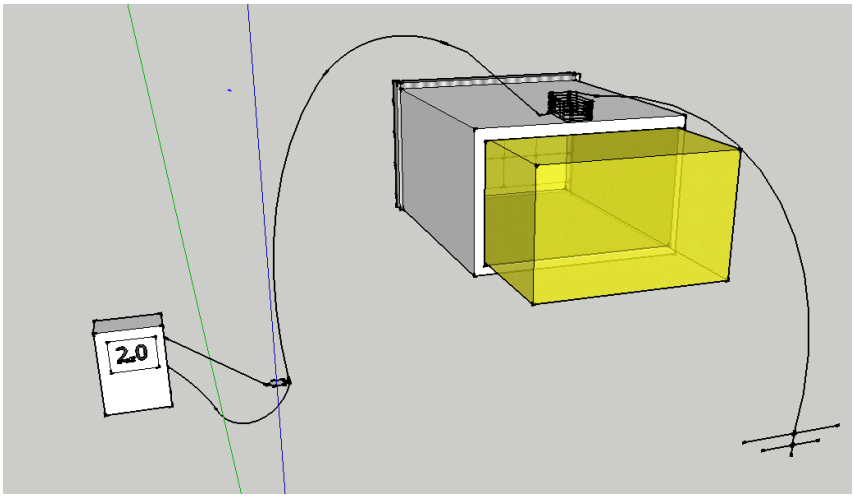

Figure 36. Gravity pulses produce electricity

Gravity interacts with light

Since light can affect gravity, can gravity affect light? This was discovered in 2008 when I tried to increase the laser beam effect by having it reflect between two mirrors. The mirrors had the reflective coating on the front surface. They were placed in parallel. A light ray arriving at one end at a 45-degree angle was reflected several times and went out at the other end as shown in figure 37. The incident angle was reduced to have a lot of reflected rays. To my surprise, the rays did not reach the end of the mirrors. After more than 60 reflections, the rays were concentrated together, moving from one side to the other at 90 degrees. The drawing shows only a few reflections.

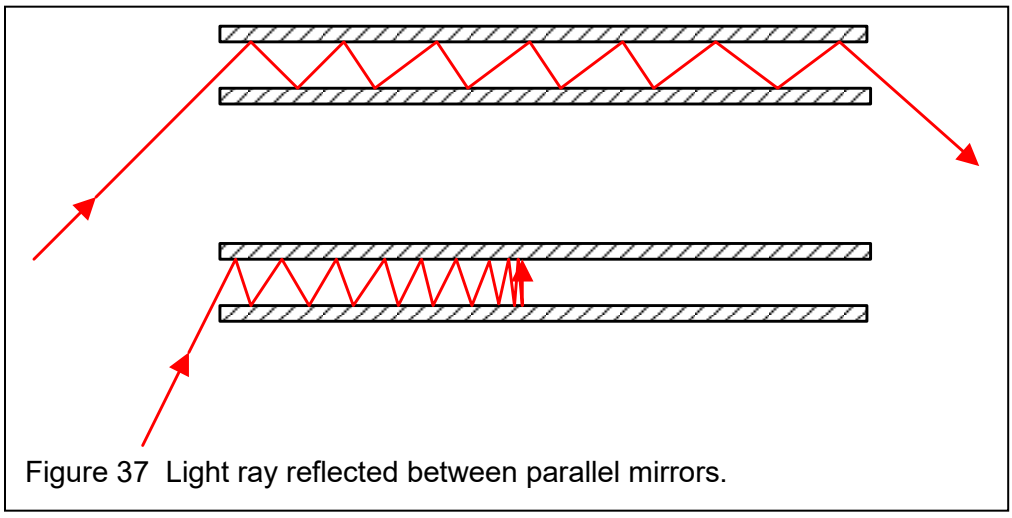

Figure 37 Light ray reflected between parallel mirrors.

The logical explanation would be this: light entities interact with gravity entities moving horizontally. This means that after several interactions, entities arriving from the left horizontally are directed a little towards the right side. The gravity entities coming from the right are now more numerous and interact with the light entities by changing a little the direction of the reflected rays that end up being reflected at 90 degrees.

Important considerations from actual observations.

1. The number of entities that make up atoms remains constant on average, as atoms emit entities continuously.

2. There is no attraction or repulsion at the sub-atomic level. There is a change in the organization of systems that makes these systems in space change position as if a force had pushed or attracted these atoms.

3. The concept of field was invented to try to explain remote interactions. The electric field explains the effect of an object with a surplus of electrons can make another object move remotely without touching it. The gravitational field tries for example to explain how the sun can act on the earth without touching it. The magnetic field tries to explain how magnets can attract or repel themselves remotely.
In reality, it is the emitted entities that go at the speed of light that act on atoms at a distance. These entities do not push or attract, but when they become a part of the atom system, their interaction with the system causes the atom to reorganize. This new system is at a new position in space and an observer believes that a force made the atoms move.

4. When entities are emitted without frequency in all directions, no frequency detector can detect them. They can only be detected when the amount of entities from one direction is different from the amount of entities from the opposite direction. This is the case for gravity perceived on earth. The entities coming from space above the object are more numerous than the entities coming from the opposite direction, because some have been deviated by the atoms of the planet. Then the difference in the number of entities interacting with the atoms of the object causes each atom to reorganize lower and thus we see the object approaching the ground as if a force had pushed it down. Weight is therefore the observed result caused by the difference between the number of entities arriving from a direction compared to the number of entities arriving from a opposite direction.

5. Since only one of these entities cannot excite the electrons of a probe, it is impossible to detect only one at a time. It is possible only detect when a large number of these entities interact with the electrons in a detector. For electrons to change the way they orbit nuclei of atoms, the electron must resonate with entities they receive. This only happens if the frequency of electrons is close to the frequency of the entities' arrivals.

All frequencies of the electro-magnetic spectrum can excite electrons that have the same frequency. Radio waves excite electrons in the antenna. Radar waves excite electrons in food placed in a microwave oven. Visible light excites electrons in cells specialized in the retina and these cells send a message to the brain visual centre.

6. What is sometimes called dark matter to explain the stars orbits in a galaxy is really simply the set of entities that travel in all directions in space. These entities do not have the color black, because they have no color, but are invisible; the word black indicates this invisibility.

7. These entities are emitted continuously by all the atoms of the universe and are sometimes called the space ether. They do not make a medium for transmitting waves, because they go at the speed of light, always.

8. Within an atomic system, the atom velocity in space is added to the velocity of the entities of the system and is equal to the velocity of light. These entities in the atomic system interact with each other continuously to make a stable system. The electron is a perfectly spherical system according to the latest discoveries. It is stable unless it unites with the positron to stop being a system and become a gamma ray again. The proton is also stable unless it turns into a neutron. The neutron is not stable and quickly becomes a proton again.

9. Quantum physics: Unfortunately the words quanta and quantum are used very badly by people who do not know the real meaning or to get publicity, because it is a word in vogue. The word quanta is in Latin and means quantity. In physics at the atomic level, it takes a very specific meaning. To better understand it, we

take an example in our macroscopic world. When you buy eggs, you use whole numbers, because you can't buy an egg and a third. The eggs are sold individually and the unit here is one egg. In the atomic world, the Millikan experiment shows that an electric charge is always a single multiple of a special unit named electron. It is impossible to have a charge of 11.34 electrons or any quantity that is not a multiple of a single electron. So the electric charge quantum is an electron. Another experience allows measuring the light energy quantum. This is explained later in the photoelectric effect.
Electron energy is always a multiple of a very small unit called the Planck constant. It is worth about 6.24×10^{-34} joules. To write its exact value, it would take a number with at least 34 digits. The official notation of these energy quanta is: *h*. It seems that the light quanta is even smaller than the energy quanta and that it would simply be a single entity emitted by the atoms. Electrons are always a multiple of a very small unit called the Planck constant.

10. Since the nuclei in matter have no frequency like electrons, the emissions from the nuclei have no frequency either, these emissions are in all directions and the density decreases with the square distance. Entities' emissions without any frequency from all atoms in the universe form what we call gravity. We can now review some important experiments in physics. Traditional explanations can be reviewed using the concept of entities and everything seems more logical.

The photo-electric effect:

The theory that light must be a particle was proposed by Einstein to explain the photoelectric effect. When ultraviolet light illuminates a zinc plate, zinc loses electrons that go into the air. However, a red light does not emit an electron from the zinc plate. The next drawing shows a curved zing plate in a vacuum glass tube. The plate is receiving light. Electrons emitted go to the brown wire and then are measured by a meter. Figure 38.

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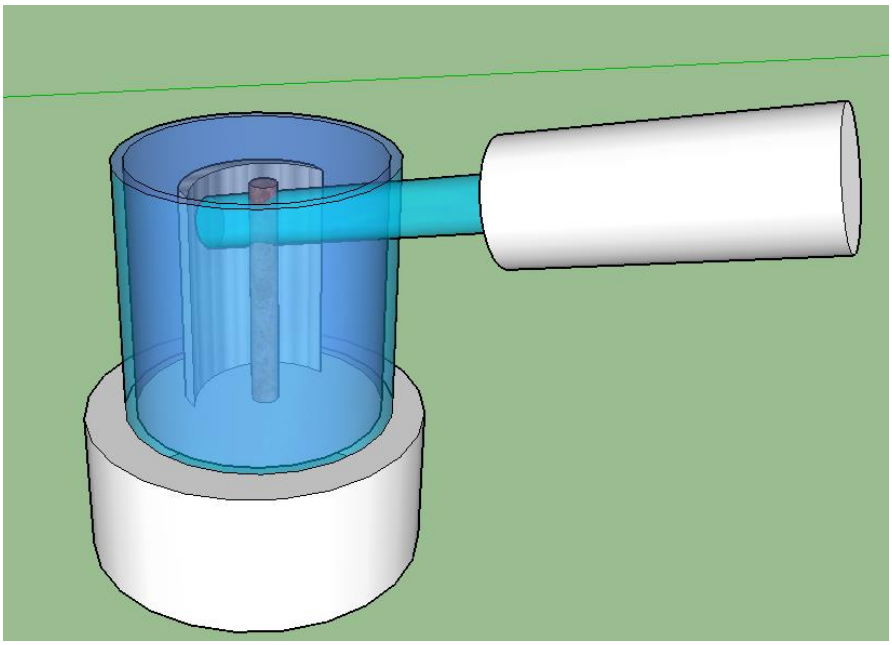

Figure 18. Photoelectric tube.

The theory advanced by Einstein to explain the photoelectric effect can then be summarized as follows. If a light ray hits a zinc plate, electrons are ejected from the zinc. Light then appears as an energy called photon. To emit an electron from zinc, it takes 8.7 x10^{14} hertz frequency. A single photon at this frequency has 5.8 x10-19 joule. This is the energy required to remove an electron from the zinc. If the intensity of ultraviolet light increases, more electrons are emitted. All the energy of a photon goes directly to a single electron to eject it from the zinc.
We did this experiment in the classroom. The light used illuminates the entire photosensitive surface and not just one point. A big problem with Einstein's explanation is that all the light is then concentrated on a single electron with a

very small surface. How does light go completely on a single electron as a single photon when it illuminates the entire surface? Impossible!

A more logical explanation assumes rather that the light having a high frequency excites only the electrons of the metal which have exactly the same frequency. These excited electrons can be ejected from the metal when their speed is high enough. This is possible if light is not the traditional photon, but a series of layers of entities emitted by electrons.

A similar effect exists at the macroscopic level when water evaporates at a temperature below the boiling point. Normally at normal atmospheric pressure, water must reach 100 degrees for water molecules to escape from the surface and become vapour, but we know that liquid water molecules are in motion and interact with each other. Sometimes several molecules act on one and increase the speed of this molecule enough to escape from the surface.

A similar effect exists at the macroscopic level when water

This indicates that this molecule has reached 100 degrees even if the total water does not have this temperature. Note that temperature is a measure of the average speed of all water molecules. So it is possible that electrons excited by light can have a similar effect on a single electron to give it an escape speed from the surface.

Light:

Is light made of entities or is it an electromagnetic wave? We must see different aspects of light to resolve this dilemma. Visible light is only a small part of all frequencies, from radio waves to infrared, visible light, ultraviolet, x-rays, and gamma rays. Visible light is always produced by electrons.

Classical theory says that excited electrons change orbits around the nucleus. Its speed changes, so its energy changes because energy also depends on speed. As it becomes unstable, the electron returns to its previous orbit by emitting energy in the form of light. This classical theory can be applied to visible light and high-frequency X-rays. Gamma rays are produced by radioactive nuclei. For lower frequencies, another theory explains the production. When an electron changes position as in a radio antenna, it emits electromagnetic waves. If the electron has a back and forth movement, then the emissions have the same frequency.

Radio waves:

The current theory says that electrons emit electromagnetic waves in space. This theory was made long before current discoveries. The mathematical part that describes the waves properties works well enough for engineers to make modern devices. However, clear explanations for what happens do not exist. By using entities concepts, it becomes logical and clear. We have seen that a static object with a surplus of electrons actually emits entities radially in all directions. The drawing shows a sphere charged with electrons. A wire starts from the sphere and goes to ground. If a switch does not connect the wire to the grounding, then the emissions are stable around the sphere. Figure 39

If the wire going to the ground touches the one coming from the sphere, then a lot of electrons to the ground and the sphere discharges completely. During this time, the surplus electrons advance in the wire towards the ground. The emissions of these electrons seem like a cloud of entities going towards the ground.

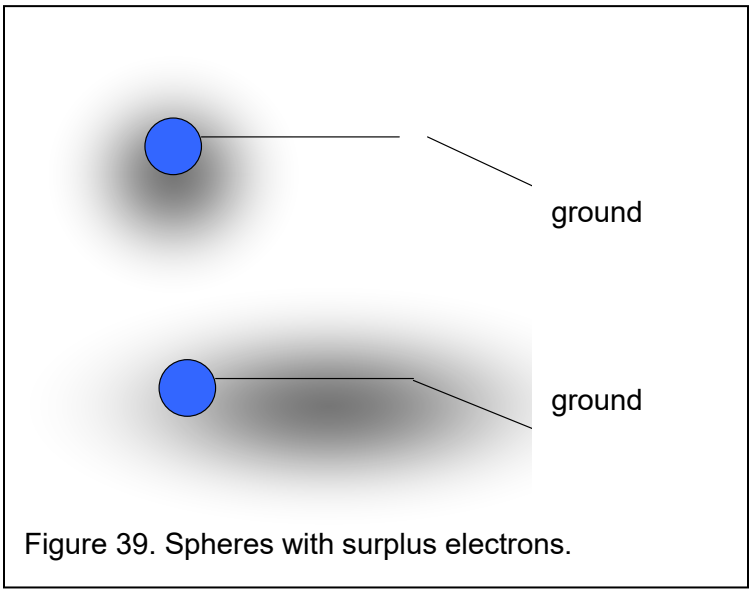

Figure 39. Spheres with surplus electrons.

If we make a circuit that gives electrons to the sphere 100 times per second, then this cloud of entities will propagate from left to right 100 times per second too. Instead of charging the sphere 100 times per second, it can be moved from left to right 100 times per second. The emission zone will also move from left to right at the same frequency, much like the following drawing. Figure 40.

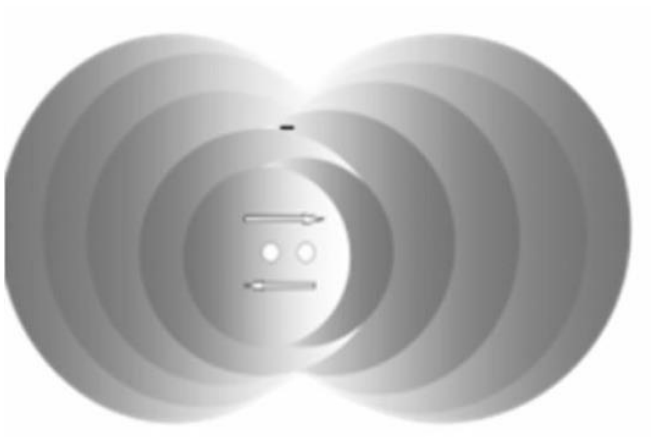

Figure 40. Entities from vibrating charged object.

The space around the charged object therefore has an varying intensities of entities emissions. This is called frequency.

Electrons can move back and forth in a conductor, such as in a cell phone antenna. At each round trip, the emissions density varies from maximum to minimum. If another receiving antenna is placed nearby, the electrons in that antenna interact with the emitted entities.

In turn, they begin to move up and down into the receiving antenna. A circuit picks up these changes and transforms the signal into audible sound.

Electrons have a frequency of movement in atoms. Because of this frequency, electron emissions also have a frequency.

The drawing (Figure 41) can help to understand how the electrons send entities. In the center is a hydrogen atom with a single electron.

Since electrons are real and not a wave, with each revolution, the emitted entities form a kind of spiral away at the speed of light. Layers of emitted entites are the cause of the observed frequencies.

If we could capture an image showing the intensity of the entities in a single moment, we would probably have a result as in the drawing showing the densities in three-dimensional spherical layers. Figure 42.

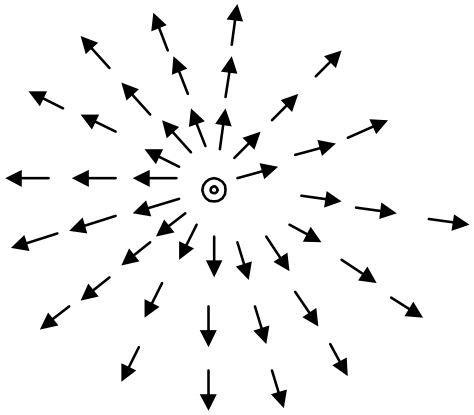

Figure 41. Emissions in spirals

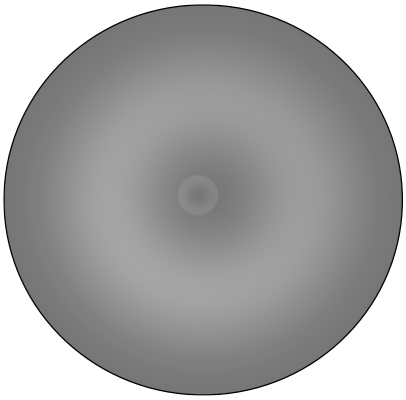

Figure 42. Entities given by electrons

The photon: wave or particle?

The theory that says that light must also be a wave is based on the effect of light passing through a slit.

Here we see the facts, the classical explanation and a much more logical explanation that does not neglect certain observed facts.

Light is said to act sometimes as a wave and sometimes as a particle, in the case of the photoelectric effect. It is then said that the light particle is a photon.

To detect light, you need a sensitive probe that reacts in the presence of light. Light has a frequency and the electrons in the probe can resonate with that frequency. After several interactions with electrons, they can give an electrical signal. If the light is very weak, the electrons cannot be excited enough to resonate and the probe cannot detect the light.

For example, if you have a laser beam hitting a blank page and you see a red dot on the page and you cut the light beam quickly, the dot appears and disappears on the page. If the light ray is cut so that it is one meter long, the point is visible. If we shorten this ray more and more, to a certain length, the point no longer appears, because the atoms of the paper can not resonate enough to emit red light.

This does not mean that there is nothing hitting the paper, it is that the quantity is not enough to excite the receptor atoms by an action called resonance.

The classical photon would then be the minimum amount of entity layers to be able to detect light by exciting electrons from the screen.

When two light rays having the same frequency meet, so that a high-density layer is placed on top of a low-density layer, they seem to destroy each other as if the light were disappearing. Figure 43.

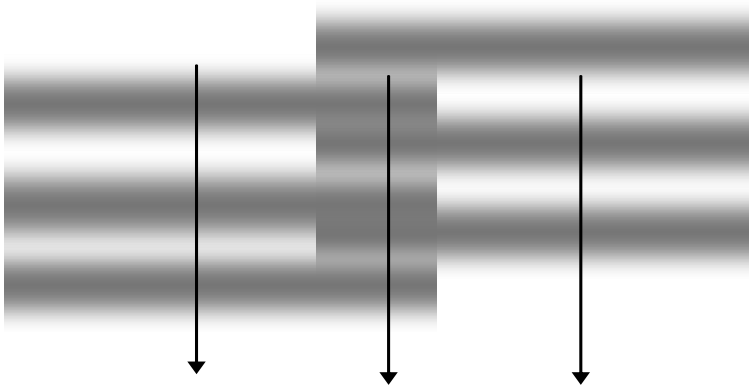

Figure 43. Two out of phase light beams superposed.

The atoms of a sheet of paper receiving these two light rays act as follows: the atoms under the left arrow are excited by resonance and in turn emit light. The atoms under the right arrow are excited by resonance and in turn emit light
The atoms under the center arrow are not excited by resonance, because the intensity of what they receive is on average always the same. They do not emit light and we see a dark band on the paper. This does not mean that the light was destroyed, but that the atoms are not excited there to re-emit light.
What happens is that the density at this point becomes constant and the detector no longer feels frequency. It no longer detects this change associated with frequency. There is no more resonance and therefore it seems that there is no more light.
The best comparison is the meeting of two waves on the water where the trough meets the top of the wave and the water at this place seems calm. The water does not disappear, but no longer has the frequency of the water wave.

Diffraction

Diffraction is the effect of light passing between two objects and also making light and dark bands. It is as if the light no longer goes in a straight line to make precise shadows.

To understand light diffraction, it is good to understand what happens when two light rays meet on a screen. Figure 44.

The drawing on the right shows that if two light rays come out of phase on a screen, there are dark bands. The atoms on the screen are not excited there, because the density of the illumination does not vary.

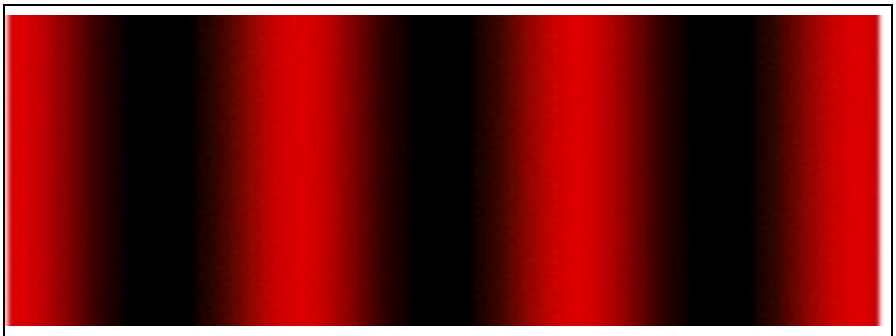

Figure 44. Interference pattern of out of phase light beams.

Light circles:

An interesting experiment shows that to emit light, several atoms must be excited together and simultaneously. We look at a distant intense light through a full hair. Here's what we see. Figure 45.
Similar circles can be observed in a car windshield when looking at a far light source.

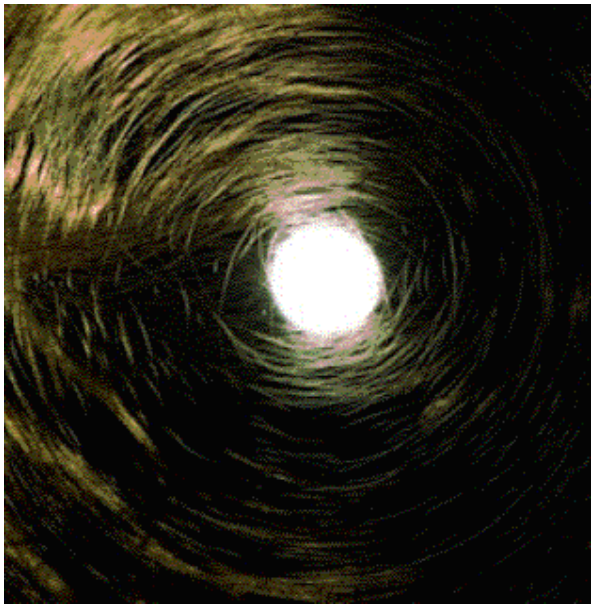

Figure 45. Circles appear through hairs.

This photo demonstrates some properties of light. To explain what is happening, here is how the photo was taken.
A flashlight placed about 4 meters away illuminates Fleur-Ange's hairs. The hair is lifted to have only a few strands. The camera takes a picture of the light passing through the hairs.
The hairs are not placed in concentric circles as the image seems to indicate, but it is the effect of light that produces these concentric circles.
The drawing that explains the observed phenomenon: Figure 46.
Light coming from a distant point advances in curved layers and there is a distance between each layer.

This is called wavelength in relation to waves on water.

Each layer is curved as would be the bottom of a spoon. If we could cut a slice of light, we would see circles like the blue circles in the next drawing. On this drawing, we also see hair in black and a hair in green. Figure 42.

If part of a hair follows the same curve as part of the light layer, the atoms of the hair are excited by light and in turn, they emit light. Only the curved part of the hair sends light, like the red part on the drawing. The hair in green always crosses the circles of light and its atoms are not excited enough to emit light Since there is a lot of hair, it seems that the luminous arcs form circles of light.

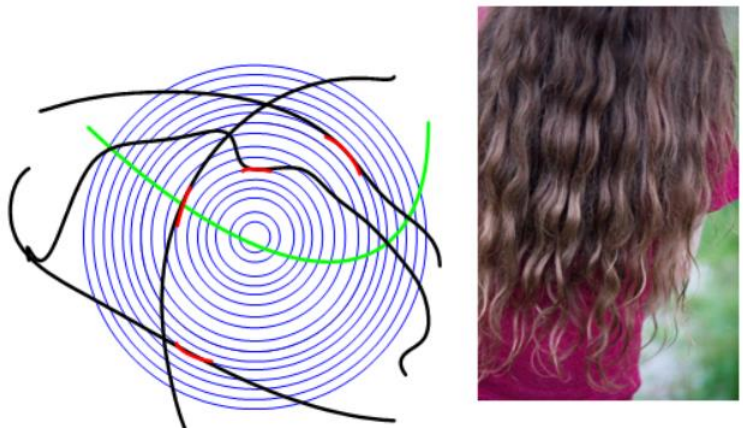

Figure 46 Only segment of hair emits light.

This phenomenon also demonstrates another aspect of light. For the atoms of the hair to be able to emit light, a group of atoms must be excited at the same time. What we see in red represents groups of hair atoms excited enough to give light.

This demonstrates that the light does not move like arrows from the source. If it were possible to see the entities of light in the air in three dimensions, it would look like the layers of an onion. When a star moves away from us, these layers of light are less close, because the source moves away. This is called the Doppler Effect and it allows us to know if the star is moving away or closer to us.

The drawing shows what we would see if we could see the entities that form this light when the source moves to the left. The density of distant layers is smaller than at the beginning. Figure 47.

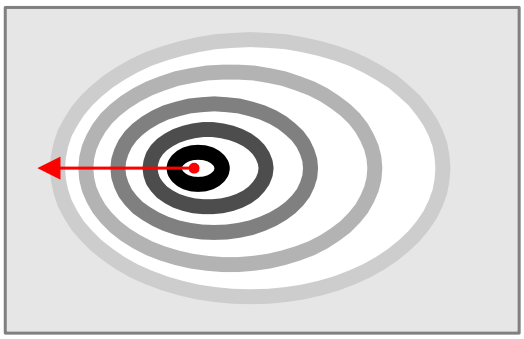

Figure 47. Light source moving to the left.

Light is neither a particle organized into a stable system like electrons or protons, nor a wave like sound, but the effect of electrons that have a frequency and emit entities from the electrons themselves. These entities spread through space at the speed of light, because it is light.

When light of a certain color arrives on an object, certain electrons resonate with that light. For example, a yellow paper receives white light containing all visible colors and frequencies. The pigments put in the paper have atoms with electrons capable of resonating with this yellow light.

When there are enough atoms that are excited, they emit layers of light having this frequency that corresponds to yellow. The other frequencies do not have electrons in the paper that can enter into resonance. The other colors still go to the atoms and the nuclei that receive it change their velocity a little in space. Since an object temperature is a measure of the average velocity of the atoms of the object, the temperature of the object increases. If the object is black, it has no atoms with electrons capable of resonating with this incoming light. So the majority of the light acts rather on the nuclei that vibrate on the spot and the black object becomes hotter.

When light arrives on a mirror, electrons resonate with that light. The light doesn't bounce like a ball thrown at the wall. Light interacts with the first layer of atoms. It

is now part of the atoms and it is these excited electrons that in turn emit layers of light to the outside of the mirror. That is the light reflected from the mirror. It's the same thing that happens when light arrives on a glass plate at 90 degrees. It doesn't pass through like a rifle bullet passing through a cardboard box. Light is now part of the atoms and it is the excited electrons that in turn emit layers of light on the other side as if the light had passed through.

Reflection of visible light

Light can be re-emitted by electrons from atoms on the surface of an object without penetration in the object. These objects are called reflectors, such as mirrors, silver, etc.

The angle made by the incoming light = angle of the reflected ray.

The angle is measured relative to a straight line at 90 degrees to the normal surface.

Total internal reflection:

A light ray that passes from water to air is deflected away from normal. This is why rocks at the bottom of the water look shallower in the distance. If the angle is too large, the light is reflected downwards and does not come out of the water. It is said that there is total internal reflection.

This happens when the angle = arcsin n2/ n1

Light passing through a single slit:

Here's a picture showing a red laser beam passing through the slot between two razor blades very close together. Figure 48.

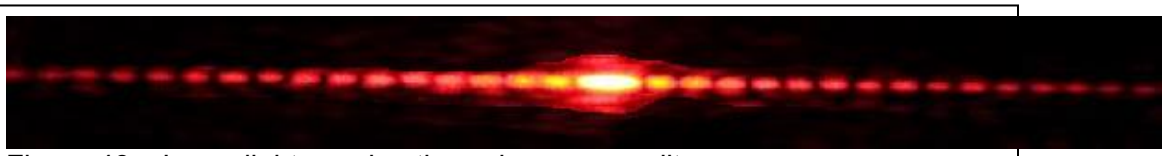

Figure 48. Laser light passing through a narrow slit.

Most of the laser light passes between the slits and produces the clear spot in the middle, but it seems that the light does not travel in a straight line, as there are spots on either side. The standard explanation says that light is a wave that interferes with itself.

The razor blades edges are very shiny. In fact, the atoms on the edge are also excited by light and begin to emit light at the same frequency. In total, there are now 3 light sources: only one from the laser and two others from the edges of the razor blade.

These three sources cause areas of low density of light entities to arrive at certain places on the screen at the same places where a high-intensity area arrives. This light in some places is out of phase with the light that illuminates the blade. So there are also dark and light patterns in some places. Again, we don't need the particle wave duality to explain how light works.

Refraction

When light hits a transparent substance like glass, it can be retransmitted from atom to atom and come out on the other side. It can be re-emitted by electrons from one atom to another and thus pass through a substance. The light re-emitted by the electrons is not always re-emitted at the same angle as it was received, because each atom influences the neighboring atoms and changes the retransmission angle.

This change of direction depends on the incident angle of light and substance. The substance refractive index is a constant of the substance that indicates how deflected the light beam will be. The refraction angle is caused by the difference in the speed of light propagation in the medium.

The speed of light transmission in a substance is slower than the speed of light in a vacuum because entities are absorbed and emitted again. Also, the relationship between the two velocities is given by the refractive index according to this formula:

n2 /n1= v1/n2 where **v** = velocity in the substance, **n** = refractive index of the substance

Electrons, waves or particles

The current theory about the electron being both a wave and a particle is based mainly on the interference pattern when the electrons pass through two slits and interfere as if they were physical waves.

It is based on many experiments results. Pier Giorgio Merli and associates used electrons passing near a charged wire that acted as a double slit. Electrons are sent one at a time towards the screen and passes near the charged wire. Each electron hits the screen on a single point. After several electrons hit the screen, we see the interference lines. Here is the result after a large number of electrons hit the screen. It is then assumed that the electron arriving near the wire acts as a wave and interferes with itself.

Figure 49.

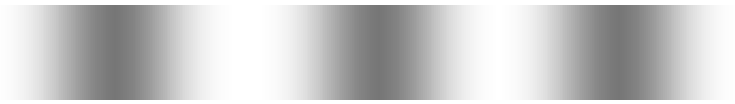

Figure 49. Diffraction pattern made by electrons

Roger Bach used a device that can close or open a second slit through which electrons passed. A similar pattern is observed also. Roger Bach does not explain how an electron can also produce this diffraction when there is a single open slit.

Some say that electrons are kinds of waves that interfere with themselves. With two slits, the diffraction is much clearer. As the number of electrons hits the sensitive surface, the minimums and maximums are evident.

This is similar to the diffraction pattern caused by the laser passing between 2 razor blades.

Another explanation is possible.

When using a charged wire instead of a slit, this is what happens. Since the wire is made of atoms, the energies of these atoms are not continuous, but jump from one value to another following Planck's constant. The values are nh where n is

an integer and h is the constant. If we make a graph of these values, it looks like a staircase rather than a line. Figure 50.

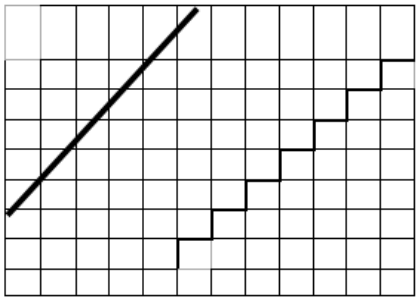

Figure 50. Analog vs. digital

An electron heading towards the wire can either pass by the wire and go in a straight line towards the screen or be deflected a little by the charged wire. This deviation has a value that also varies according to n*h* and is not linear. When the deflected electron hits the screen, not all positions are allowed. This makes bands on the screen as if the electrons have interfered with themselves.
The drawing shows the electrons trajectory that advance one by one and arrive on a screen. Figure 51.

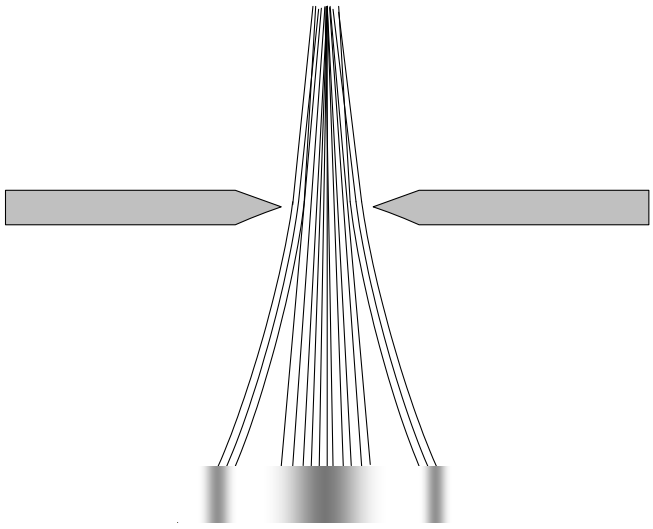

Figure 51. Real path of individual electrons.

For Roger Bach's results, a similar explanation shows that the slit edges also have atoms with energies quantized according to n*h*. The electrons of the atoms at the slits edges interfere with the emitted electron and give it a quantified amount of energy too. So the deviated trajectory takes quantified values too. This has the effect that the screen cannot arrive at any location. This forms the bands as if the electrons were acting as physical waves.

The electron should not be considered as a solid particle or an electric wave, but as a complex system with precise properties.

Another point to consider is that a wave is a deformation of a medium. This deformation spreads from one place to another without the medium making the same movement. Sound travels from mouth to ear through the air, but the air that reaches the ear is not the air that came out of the mouth.

The electrons in a cathode ray tube travel themselves from one end to the other end, and can even turn the small glass wheel as shown in Figure 52.

The grey arrow represents the electrons hitting the arms of the spinning wheel. To push the arms, real matter is needed.

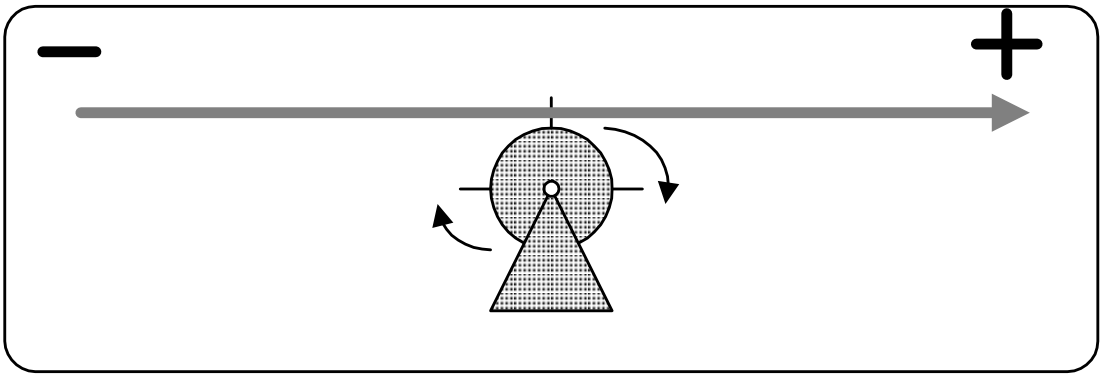

Figure 52. Spinning wheel

Using the concept of entities emitted and absorbed by all atoms in the universe, we can give logical explanations for the phenomena observed.

Our solar system:

The famous space-time curvature theory supposes that the sun's mass change space around itself. Space becomes curved and time changes also.

The drawing shows that curvature. To explain why the earth 'falls' into the space-time curvature made by the sun, a vertical downward extra force is needed. What force from above pushes the earth down to fall into this hollow?

The magenta arrow in this drawing represents this force. A new kind of force would have to be invented to explain this because it does not exist. This theory is a mathematical trick and not an explanation of what happens. Figure 53.

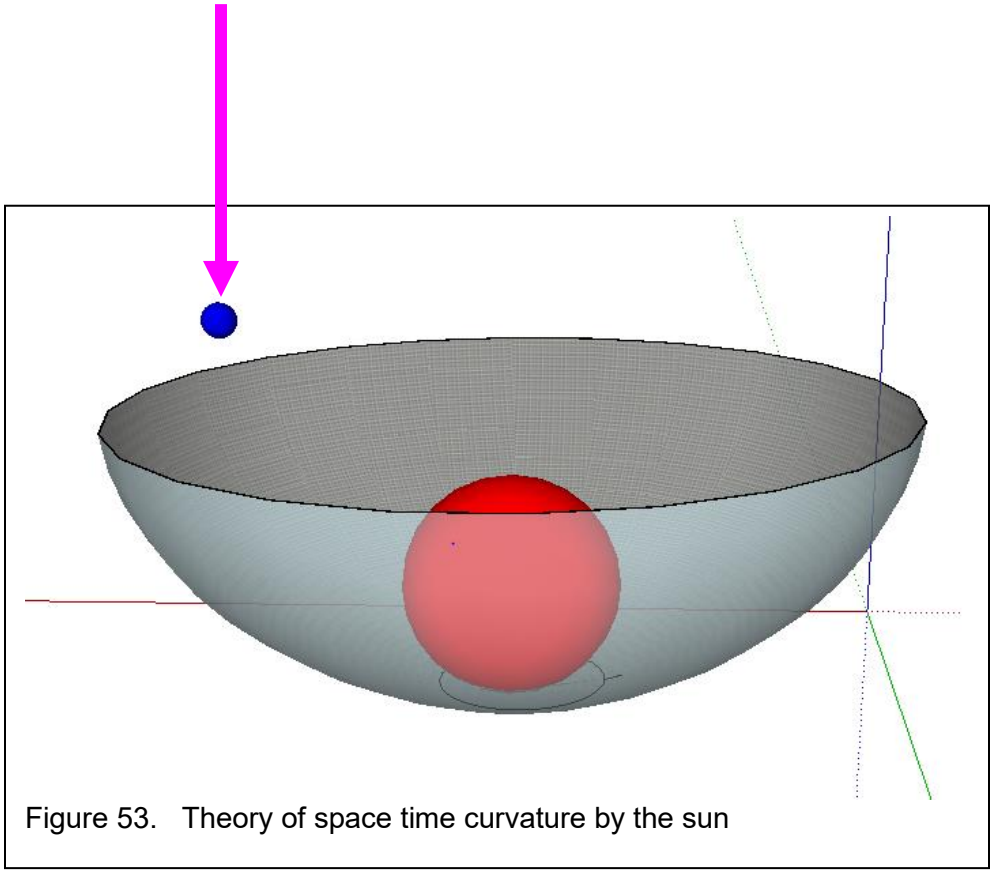

Figure 53. Theory of space time curvature by the sun

A current theory says that gravitons are responsible for gravity, but we have never been able to observe these famous gravitons that may not exist.

If it is true that all atoms are made up of entities that they receive from all directions of space and emit in all directions, then a new way to explain the stability of the solar system is possible.

The sun emissions interact with some of the emissions coming from all directions of space.

Because of these interactions, there is a spherical area around the sun where there is a smaller entities density. At a certain distance away from the sun, this effect is almost zero and the density resembles the average. In the drawing, each gray pixel represents an entity going at the speed of light. The lighter area represents the places where the sun has blocked emissions coming from the other side. Figure 54.

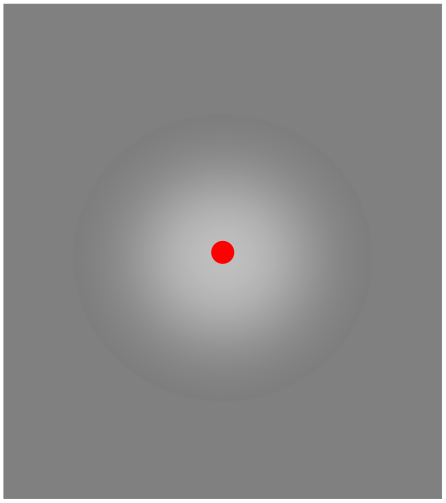

Figure 54. Entities blocked by the sun

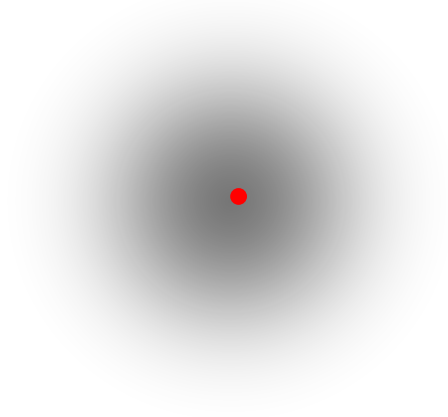

Figure 55. Émissions du soleil

However, the sun also emits entities in all directions. The density of these emissions decreases with the square of the distance as shown in Figure 55.

When we superimpose the emissions coming from the sun with the decrease in density caused by the absorption by the sun, we obtain something like figure 56.

At a certain distance from the sun, we have a spherical area where the density on each side is the same. This is represented by the lighter shade of grey.

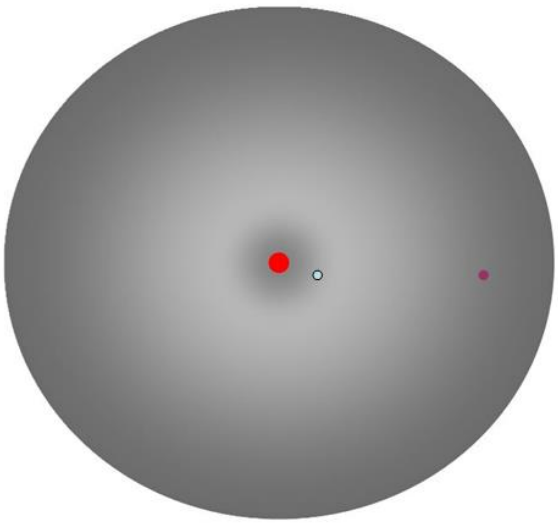

Figure 56. Entities near the sun.

In that region, an object is pushed neither on one side nor on the other. It continues in a straight line away from the sun. As it goes away, it reaches an area of higher intensity and these entities bring it back toward the sun again.

The blue dot represents the earth circulating where the intensity of the entities coming from space and the entities coming from the direction of the sun are balanced. The purple circle represents Pluto, far from the sun. figure 52.

If the earth moves a little away from the sun, the intensity coming from space is greater and causes the earth to return to the sun. If the earth returns too close to the sun, the entities coming from the direction of the sun are more intense and cause the earth to move a little away from the sun. These two effects cause the earth to follow an undulating elliptical orbit rather than a circular one. Figure 57.

The drawing is not to scale because the effect is small.

The Earth's orbit must be continually adjusted when it moves too far from the sun and when it gets too close. The entities coming from the sun’s direction (red arrows) and those coming from space (blue arrows) make the orbit look like the

blue line in the drawing. The drawing is not to scale because the changes are minimal.

The magenta dotted line represents the orbit if the earth simply followed Newton's formula, without any effect from space.

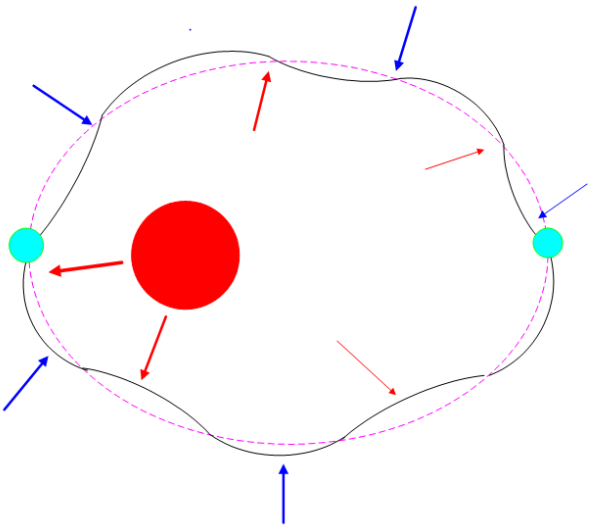

Figure 57. Earth orbit

Here is the drawing used on the cover. Figure 58.

The drawing allows visualizing the area where the planets are in equilibrium around the sun, in the gravitational 'hollow'.

The red sphere represents the sun. The curved drawing represents the intensity of gravity entities. Close to the sun, the pointed area on this drawing indicates the density is higher than average. Then it decreases away from the sun and increases again farther from the sun.

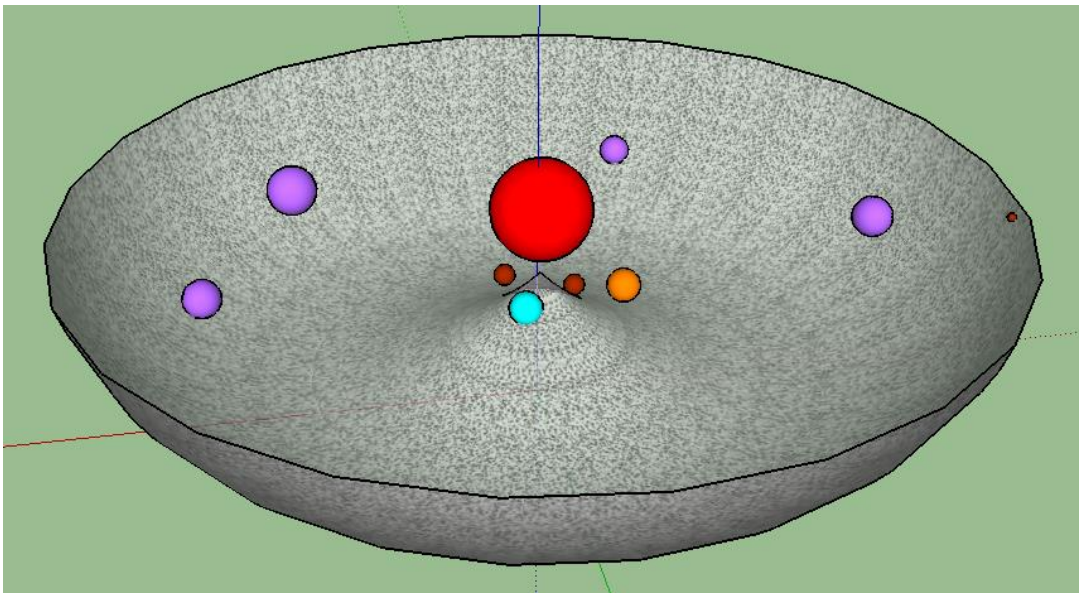

Figure 28. Planets in solar system. (not to scale)

Planets circulate in a region where gravity entities on one side are balanced by gravity entities on the opposite side. The distance from the sun also depends on the speed of the planets. If a planet gets too close to the sun, it is pushed back and if it moves too far, the gravity entities from space brings it back to the sun. This double effect is the cause of the elliptical the planets' orbit. In June, gravity is 43.27% smaller than in January and yet, the earth returns to the sun when it should continue to move away forever according to classical gravity formula.

This is what causes a comet approaching the sun to be repelled by these high-density entities.

The asteroid belt is in the palest region of the drawing, where the density of entities is almost equal on each side.

As mentioned at the beginning, if the sun sends something towards the earth, it should push the earth and not attract it. When I throw a rock at a beer bottle, the bottle does not come towards me, but it moves away.

If gravity is a gravitational field, what makes that field? The theory of gravity, as a force of attraction, has no logical meaning since we cannot describe the true nature of the gravitational field.

Entities' Interactions with matter.

Uranium has a big nucleus. The nucleus cross section is very small compare to the atom cross section. It is about 10^{26} smaller.

About 1 neutrino out of 10^{26} has a chance of hitting a nucleus. Since the entities are neutral, the effect is minimal.

If an entity is smaller than a neutrino, then how do they interact with a nucleus?

To understand it, we must go down to the very small level of the nucleus and not compare to the macroscopic level, our level. The proton and neutron are not steel balls that can be pushed by throwing another ball at them as in billiards.

They are complex systems, looking more like clouds than a marble. The entities that compose them travel at the speed of light and interact in the nucleon. Since there is no hard surface to reflect them when an entity comes to the surface, it continues towards space. If the nucleon did not receive as much as it emits, it would disappear. We know that the proton is stable, it does not disappear. So it must on average receive entities as much as it emits.

The proton is always moving relative to space. If the reception of entities from all sides is on average equal, it 'rebuilds' itself by continuing its momentum. If the receptions on all sides are not equal, it 'rebuilds' itself by continuing its momentum in the opposite direction. What enters the nucleon is now part of the system and does not push on the system.

A bit like 10 fish joining a school of a million fish. The newcomers do not push on the fish school, but are now part of the group. The group movement does not change much with this small number of arrivals. It would be different if the input was greater.

It is also necessary to visualize this: what goes in space in all directions and interact with matter is not caused by only one interaction. It is caused by the difference of opposite interactions if the quantity on one side is different from the other. If the quantities are on average equal, the effect is cancelled as two equal and opposite vectors cancel each other out.

It is fair to say that gravity does not push or attract, but changes the direction of motion of an object's nucleons relative to space by becoming a part of the nucleons and interacting with the parts of the nucleons.

This happens when we reduce gravity.

A one-kg cylinder is placed on a table. If you are at the equator, this place goes east at about 375 km/s, because the earth makes a turn every 24 hours. In 24 hours, at this speed, the object will have circled the earth and returned to almost the same place. In addition, the sun and our galaxy go about 922 km/s in space, which gives a speed of about 1300 km/s in space. Nothing is at absolute rest in space.

The drawing shows this object hanging from an elastic band. Because of gravity, the object has a 9.8 Newtons weight. This force stretches the elastic band downwards and the elastic must exert a 9.8 N force upwards. Thus, the object remains at the same height above the table. In this example, at the beginning, it is 10 cm from the surface of the support. Figure 59.

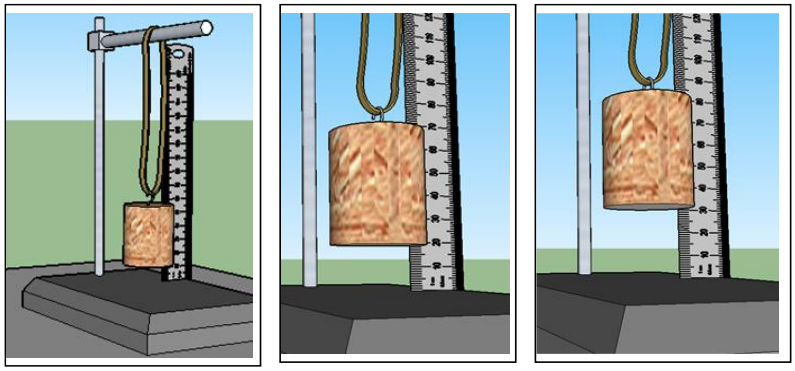

Figure 59. Mass held by elastic band.

If a powerful light ray passes over the mass, it rises to 20 cm and then to 30 cm, because the elastic band exerts an upward force. As weight decreases, the mass moves away from the ground.

The speed of the object is always 375 km/s to the east, because the earth rotates. If no force was exerted downwards on the object, it would have continued in a straight line. The following drawing is not to scale; it shows that the object would be away from the surface of the table and would be in space after a few minutes. Figure 60.

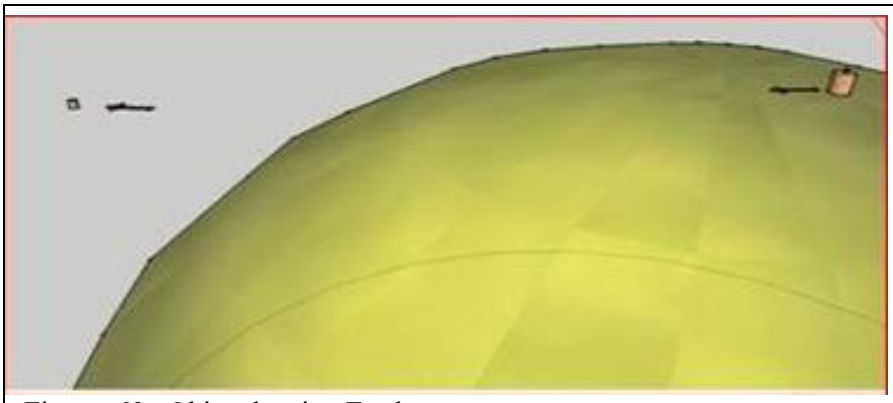

Figure 60. Object leaving Earth.

The object after one second has traveled 375 km in space and is still above the table; that is because it has two directions in its speed. One horizontal direction that has a value of 375 km/s and the other vertical that has a value of about 5m/s. Figure 61.

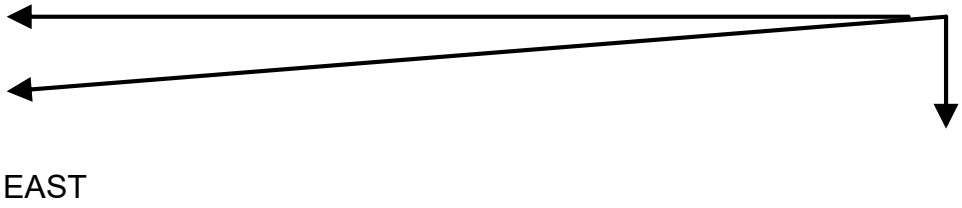

Figure 61. Vectors showing two speeds.

In physics, this is demonstrated by arrows called vectors. The arrow that is at a downward angle is called the resulting velocity when the two speeds are added together. The large arrow to the east represents the 375 km/s speed, and the arrow down represents the 5 m/s speed. This drawing is not to scale, because we would not see the small arrow down.

If we send a lot of light horizontally above the object, its weight decreases and the force of the elastic brings it a little higher, towards 20 cm.

This means that the downward velocity vector has decreased a little and the angle is smaller. Figure 62.

Figure 62. Vectors for new speeds.

We continue to send very intense light above and weight decreases. The object is now 30 cm from the table, then 40 cm and finally 50 cm. It does not rise higher, because it is in a state of levitation. Its final velocity vector is horizontal and causes it to float above the table; the elastic could be removed, as it no longer exerts force upwards.

Optical tweezers.

This is used in the laboratory to lift small objects with an optical tweezers. A powerful laser beam is concentrated by lenses to produce a cone in a liquid. The entities of light interact with the entities of the liquid and with entities coming horizontally from space. When enough entities are deflected, the particle in the liquid is levitating and can be moved using the special laser beam.
See https://www.mdpi.com/2072-666X/10/8/507/htm for details.

The electron

The electron is a stable system about 2000 times smaller than the nucleon. In a cathode ray tube, the very hot filament ejects electrons. Figure 63. The negative filament emits entities that participate in the internal interactions of electrons. Figure 64. The new systems called electrons change position in space so that they seem to have moved in a certain direction.

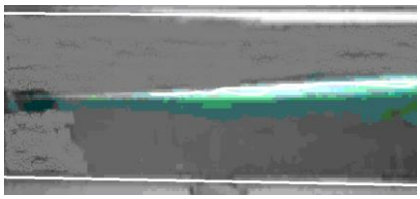

Figure 63. Electrons in cathode tube.

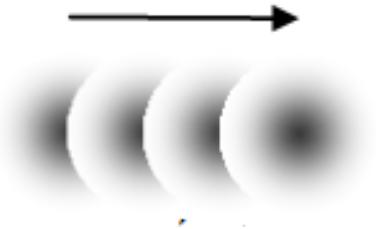

Figure 64. Electron moving .

The electrons in the vacuum tube interact with a powder on a plate. The electrons of that powder are excited and emit a green light. It is possible to see where the electrons are moving.

The following drawing provides a better understanding about what is emitted and received at the atom level. Figure 65.

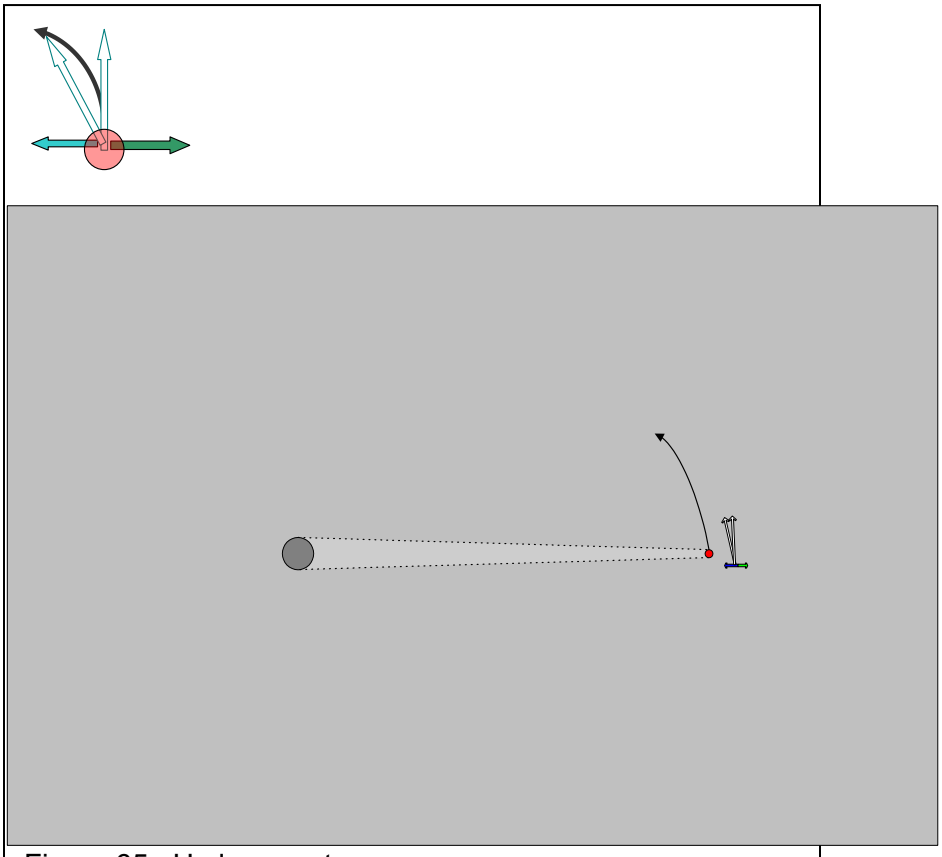

Figure 65. Hydrogen atom

- At these dimensions, the electron is 100,000 km from the proton - The pixels in the grey background represent radiation that goes in all directions in space, from all matter in the universe.
- The gray circle represents a proton that blocks part of the emissions to the electron (red circle) on the right. As the electron is far away (relative to their size) the emissions of the proton merge with the space background.
-The proton absorbs some radiation, but since it does not send radially, there is less going to the electron.
- The vectors demonstrate the push towards the proton.

- The blue vector represents the horizontal effect towards the proton and the green vector, the effect that moves away from the proton. The effect towards the proton is a little greater, this makes the electron to change its direction a little. This causes the original direction (vertical white vector) to change a little towards the proton (white vector leaning towards the proton). Thus, the electron is always moved towards the proton as Antti Saari suggested a few years ago.

The proton emits in all directions from each point on its surface while the electron seems to emit radially (as if everything comes from the center only), because it is very small compared to the proton.

At a distance measured in meters, the emissions of atoms merge with those of space and the atom appears "neutral" as if they were not emitting.

The universe is filled with these emissions going in all directions.

It is estimated that about $65x10^{12}$ neutrinos pass per cm^2 per second. The amount of emissions from entities going in all directions in space is billions times greater.

The next drawing probably shows some emissions of the proton (left) and of the electron. Size dimensions are to scale, but the distance is not to scale. Figure 66.

The black lines represent only part of the path of the emissions. At the size of the proton, the emissions of the electron are radial (seems to start from a center). The proton emits in all directions from every point on its surface and from every inner part. At a certain distance from the proton, its emissions merge with emissions from space and seem to no longer exist.

At this dimension of the proton, the electron would be 10,000 km from the proton.

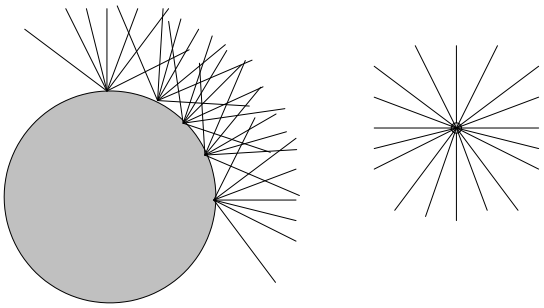

Figure 66. Emissions from proton and electron.

The drawing is not complete, because it would take billions of lines to show the path of the entities that arrive and leave the atom.

The electrons are therefore in orbit around the nucleus in a position where the interactions with the space entities is balanced by the interactions with entities coming from the nucleus.

When light reaches the electrons, the interaction reorganizes the system electron closer to the nucleus. However, they immediately receive a greater effect from the nucleus, as they are closer now. They oscillate in their orbit, a little further and a little closer while emitting entities also in space. This oscillation has the same frequency as the light that illuminates them. The electrons excited in this way reflect light at the same frequency.

This is true for objects that have white pigments. A yellow paper reflects yellow light because it does not have enough atoms that have electrons capable of resonating with light from other frequencies. The other frequencies that are not yellow go to the nucleus and it is therefore excited a little. Its displacement

changes and as its velocity changes, and there is a rise in temperature. Temperature is a measure of the average velocity of the atoms of the object.

When the speed of a particle in an object is greater than the speed of light transmission in that object, we see a blue glow called the Cherenkov Effect. Really, the particle does not go faster than light in a vacuum.

Magnetism

To understand magnetism, we must start by understanding how electrons act in the case of static electricity and when they are in motion.

We stated above that attraction at the level of atoms does not exist. This needs to be explained further.

In the experiment done with a neutral light ball and a rod charged with electrons, we see the electrostatic effects. The neutral ball becomes polarized and it is pushed towards the rod. Figure 67.

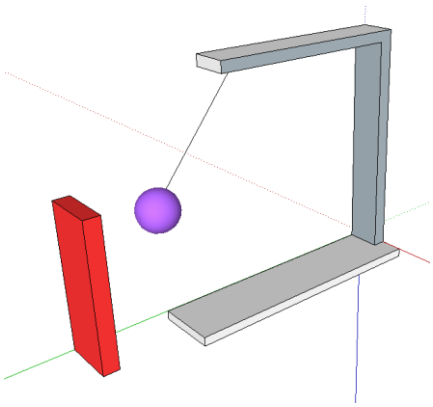

Figure 67. Electroscope

If the ball has a lack of electrons and the rod has a surplus of electrons, the ball moves closer to the rod. If the ball has a surplus of electrons and the rod has a surplus of electrons, the ball moves away from the rod.

However, when two objects go towards each other, there are two possibilities to explain this.

1. One object attracts the other object.

2. One object is pushed towards the other.

Is it possible for the ball to be pushed towards the rod instead of being attracted?

At the beginning of the paper, we saw how a probe can detect a surplus of electrons. In Canada, in winter, the air is very dry and objects easily acquire

electrical charges by friction. These charges are not dissipated quickly into the air.

In a normal room, it is possible to have one wall of the room with a surplus of electrons and on the other side, objects with a lack of electrons.

The sensitive probe easily detects this phenomenon.

If you approach the electroscope near a wall, the ball is pushed back and if you approach it from the opposite wall, it is attracted. What for?

In fact, what seems to be an attraction is still an interaction with entities resembling a pushing force. Here is the explanation. Figure 68.

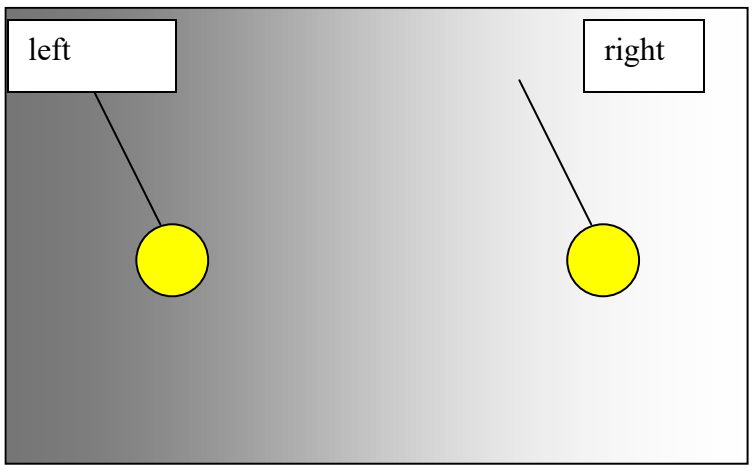

Figure 68. Effect on electroscope if room is not neutral.

The drawing shows a high pixel density near the left wall. This represents the entities emitted by the left wall that has a surplus of electrons compared to the smallest number of entities coming from the right wall.

The two yellow balls also have a surplus of electrons. The entities coming from the left have a higher density. They interact with the entities of the ball and the atoms of the ball rearrange to the right. This produces a rightward movement for the ball.

The same thing happens for the yellow ball near the right wall, because the intensity is higher from the left side. The ball rearranges to the right as well.

An observer might say that the ball was pushed back by the left wall and attracted by the right wall. In reality, the force always looks like a push, not an attraction.

So we explain the movement of the ball by saying that a force pushed the ball, but in reality, it is an internal reorganization of the atoms that causes the ball to change position in space. The more numerous entities coming from the left have caused this displacement. These entities do not push or attract, but cause a change in systems called atoms.

To understand the effects of static electricity, one must always consider entities going in all directions around objects.

Electrons moving in space

If you touch a plasma ball with only one finger, a thin filament goes from the middle and goes to the finger.

If you touch in two places, two filaments start from the middle. In a short time, we see the filaments pushed towards each other from the middle of the ball. Figure 69.

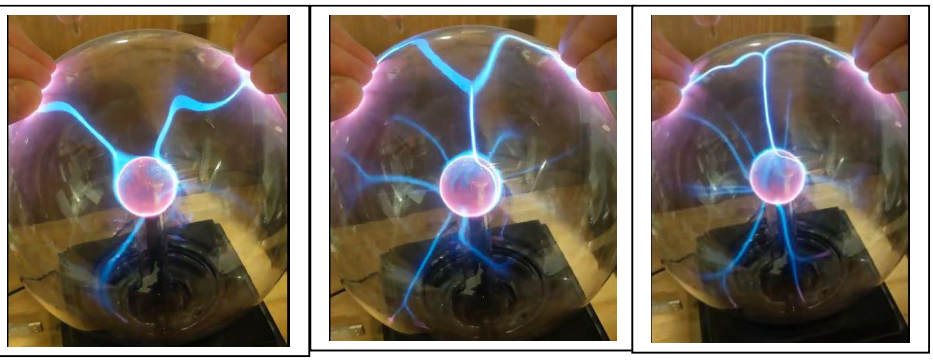

Figure 69. Plasma ball.

This may seem trivial, but indicates a very important fact. Why are the two filaments coming closer? This makes it possible to understand the magnetic effect.

The drawing shows that a beam of electrons passing under a loop of electrons conductor always moves to its right. The following drawing demonstrates this. The blue arrows indicate the direction of the electrons in the copper wire loop.

The red arrow indicates the path of the electrons. The blue circle represents the moving electron.

Figure 70.

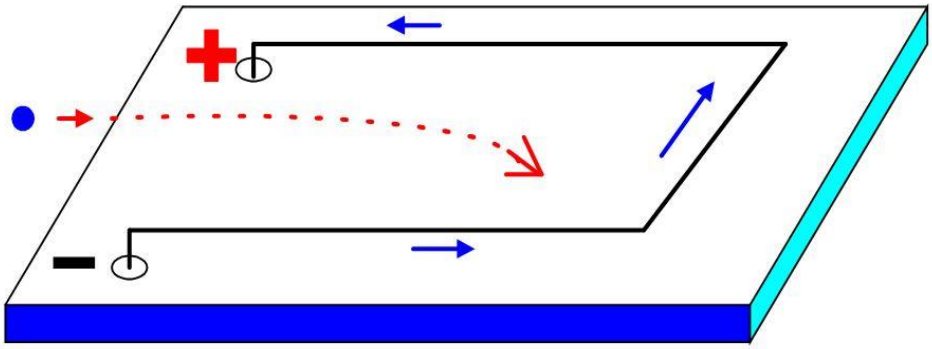

Figure 70. Electron turns right.

We notice that the electrons beam gets closer to the wire having electrons moving in the same direction. The electrons of the beam move away from the wire that conducts the electrons in the opposite direction.

This fact is the basis of the magnetic effect.

Why do electrons going in the same direction get closer? They seem to attract each other. In reality, what happens is similar to the Venturi effect in a fluid.

Figure 71 shows this effect.

The space around moving electrons contains billions of entities going at the speed of light. Interactions between entities emitted by moving electrons increase the amount of entities in space going in the same direction. In the drawing, there are more entities that go to the right.

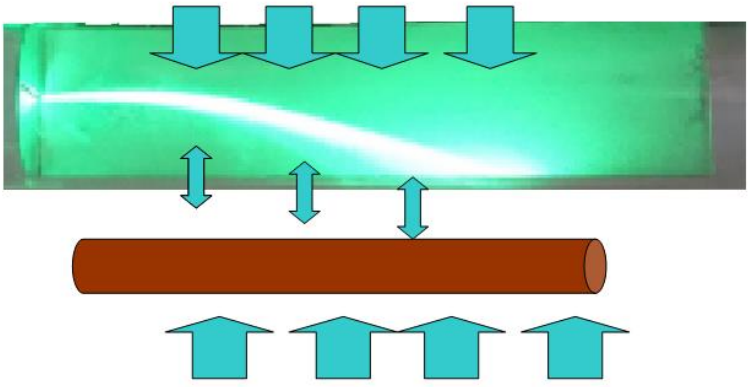

Figure 71. Electrons deviated in a chathode ray tube.

We placed a copper wire under the cathode ray tube. (Brown cylinder). When many electrons advance in the wire in the same direction as those advancing in the cathode ray tube, the electrons in the tube move a little towards the copper wire. In summary, electrons going in the same direction change trajectory and atoms move closer to each other because of the interactions between these electrons and space entities. They seem to be attracted.

The blue arrows represent the vertically arriving space entities. The entities emitted by the moving electrons interact with those in space. These interaction causes to have more entities between the wire and the cathode ray tube going towards the right side. Less are going vertically between the electron beam and the electrons advancing in the wire. (Small blue arrows). This is enough to move the electrons from the beam towards the copper wire.

If you have used cables to charge a car battery, you may have noticed that the two cables moved away from each other when the current was at maximum. Indeed, the electrons going in opposite directions move away from each other, because between them, the density of entities going at 90 degrees with respect to the motion has increased and causes the atoms of the cables to reorganize further as if they were repulsed.

The magnetic effect is always produced by electrons and not by the nuclei of atoms. In an electromagnet, electrons are moving in the conductive wire. In a magnet, electrons are moving in atoms and their cumulative effects are 'lined' together. If you magnetize iron filings in a test tube, you get a magnet. If the iron filings are stirred, the magnetism disappears, because the effects of each filing are no longer aligned. The effect of one filing cancels the effect of the inverted filing.

When two magnets seem to attract each other, in reality they are moved towards each other by entities traveling through space in all directions. Figure 72.

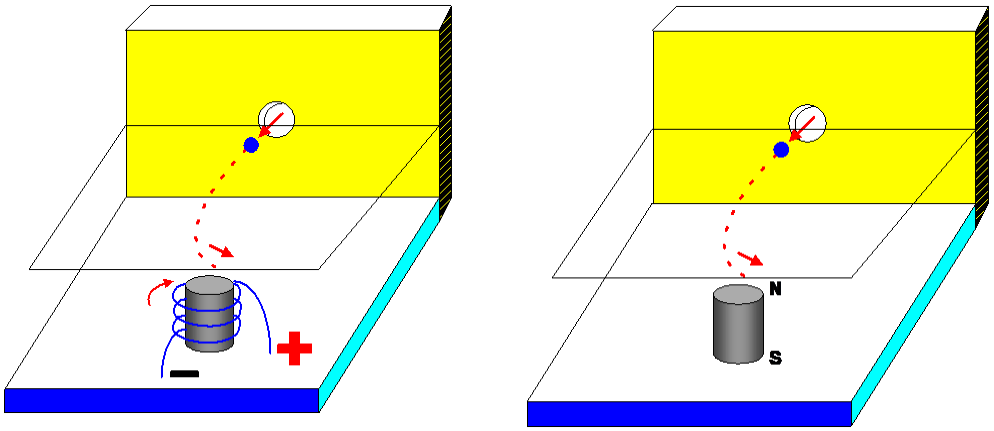

Figure 72. Magnets have the same effect as electromagnets.

The fact that powerful magnets can exert immense force shows that the number of entities in space must be very large, much larger than the number of neutrinos.

APPENDICE:

Most of the explanations given here were presented in Prague to a group of international scientists. You can watch the presentation here:

https ://science21.cz/conference/?p=869

Each entities making matter have to be recreated at each instant in a new position as if it was traveling at speed of light. That new position determines the nature of the systems called atoms so that each one follows exactly physics laws. This gives an idea to the meaning of the infinite intelligence and power of our Creator. If creation was made for us, humans, it also show the immense love the Creator has for us.